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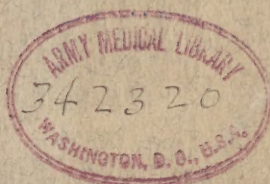
Psychiatric Monographs

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THE ETIOLOGY OF CHILD BEHAVIOR
DIFFICULTIES, JUVENILE DELINQUENCY
AND ADULT CRIMINALITY
WITH SPECIAL REFERENCE TO THEIR
OCCURRENCE IN TWINS



Box 1240



BY

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AND

ISABEL ROSANOFF PLESSET, B.A.

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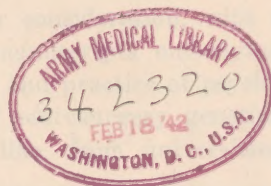
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ANNOUNCEMENT

The Department of Institutions of the State of California has undertaken the publication of a series of Psychiatric Monographs, of which the present issue is the first number.

The monographs will be issued at irregular intervals, as manuscripts are submitted to the Editorial Board and found by the Board to be acceptable for publication in the series.

The issues are expected to be of variable size and, accordingly, will be sold at variable prices. Subscriptions will not be received. Standing orders for future issues will be accepted, and placed on file until countermanded, for delivery as the individual monographs are published.

Standing orders for future issues, as well as orders for single monographs of current issues, should be addressed to Mr. George H. Moore, State Printer, Sacramento, California.

The main purpose of this new monograph series is to provide a medium for the prompt publication of psychiatric, psychologic, and sociologic studies by members of the staffs of the institutions in the jurisdiction of this Department.

The Editorial Board will receive also for consideration, with a view to possible publication in the series, manuscripts embodying original contributions pertaining to the science and practice of psychiatry, including such contiguous fields as those of neurosurgery, genetics, psychology, criminology, sociology, and the like, from universities, hospitals, and other institutions anywhere.

AARON J. ROSANOFF, M.D.,
Editor-in-Chief.

Sacramento,
December, 1940.

It has been suggested that, to begin with, we should at least attempt a clarification of these concepts by formulating clean-cut definitions of them. Otherwise, it has been said, is it not true that all children present behavior difficulties and symptoms of delinquency and all adults are lawbreakers?

Similar questions have been raised in connection with other portions of the material of our research: What is intelligence? How would one define mental deficiency? Is epilepsy a clinical entity? etc.

It seems to us that such questions and suggestions are not helpful; and that, on the contrary, they would serve but to increase the fog of an atmosphere which is already much befogged. While they have an appearance of rigid scientific demands, their effect could be only to divert attention from the clinical material presenting the problems under consideration and to send it off into avenues of speculation instead.

It seems to us that such definitions as have been demanded represent possibly the goal, to be reached inductively, rather than the point of departure, of such a study as ours. It is more probable, indeed, that, as we proceed with the analysis of the material, our preoccupation will come to be mainly with other and more concrete matters.

Accordingly, let it suffice, for the moment, to state that our cases of child behavior difficulties were found in child guidance clinics, school clinics, neurologic clinics, and in special classes for problem children in the public schools. Any boy or girl, under 18 years of age, who has been brought to the attention of juvenile court authorities by reason of some offense and thereupon either placed on probation or committed to a correctional institution, has been classified for our purpose as presenting a case of juvenile delinquency. Any person, 18 years of age or over, who has been convicted and sentenced by a criminal court to serve a term in a city or county jail or in a state or federal prison, or granted probation, has been classified for our purpose as presenting a case of criminality in an adult.

In many of our cases of adult criminality the clinical histories show that such criminality was preceded by juvenile delinquency and, earlier, by predelinquent traits in the shape of child behavior difficulties. Many other cases present, as complications, mental deficiency, epilepsy, psychotic disease, etc. In other words, there is much overlapping not only among the three groups of behavior problems with which this monograph is principally concerned, but also between them and certain so-called constitutional mental disorders.

For the successful utilization of twin material in a study of the etiology of any physical or mental disorder, it is a matter of first importance that the cases of twins be correctly diagnosed as to type,

i.e., whether monozygotic or dizygotic. It is also highly important to secure an unbiased selection of the material, the special danger to be avoided being that of overloading the material with cases of concordant findings.

The features of method which we have employed in diagnosis of twins as to type and in selection of our material have already been described in published reports of other phases of our research (10, 11), and will not be dealt with further in this connection.

§ 2. GENERAL SURVEY OF THE MATERIAL

Our entire material has been summarized in Table I, in which it is presented *en masse* without an attempt at detailed analysis for the present. It will be noted that the cases of child behavior difficulties have been classified into two general groups, containing, respectively, preneurotic and prepsychotic types, and predelinquent types. Our use of these terms will, we trust, be made clearer eventually.

Type	Total		Male		Female	
	Number	Percentage	Number	Percentage	Number	Percentage
Preneurotic	10	10.0	5	50.0	5	50.0
Prepsychotic	10	10.0	5	50.0	5	50.0
Predelinquent	10	10.0	5	50.0	5	50.0
Total	30	100.0	15	100.0	15	100.0

TABLE I. INCIDENCE OF CHILD BEHAVIOR DIFFICULTIES

TABLE I. INCIDENCE OF CHILD BEHAVIOR DIFFICULTIES, JUVENILE DELINQUENCY, AND ADULT CRIMINALITY IN 409 PAIRS OF TWINS, BY TYPE OF TWINNING, SEX, AND NUMBER IN EACH PAIR AFFECTED

Clinical group	Monozygotic twins						Same-sex dizygotic twins						Opposite-sex twins				Grand total		
	Male			Female			Male			Female			Both affected	Male alone affected	Female alone affected	Total			
	Both affected	One affected	Total	Both affected	One affected	Total	Both affected	One affected	Total	Both affected	One affected	Total							
Child behavior difficulties: preneurotic and prepsychotic types	14	5	19	8	2	10	10	9	19	11	21	32	16	14	10	40	120		
Child behavior difficulties: pre-delinquent types	8		8	14		14		4	9	8	11	19	9	7	2	18	68		
Juvenile delinquency	29		29	11	1	12	12	5	17	9		9	13	28	5	46	113		
Adult criminality	29	9	38	6	1	7	5	18	23	1	3	4	3	25	8	36	108		
Total	80	14	94	39	4	43	32	36	68	29	35	64	41	74	25	140	409		

Both affected has reference not only to similar affections existing in both of a given pair of twins, but also to affections representing both quantitative and qualitative intra-pair dissimilarities. Thus one twin may present in his case history merely a moderately severe child behavior difficulty, while in the other there may be a more severe and more persistent difficulty which has eventually merged into juvenile delinquency and into recurrent adult criminality; or one of the pair may present one of the behavior difficulties which are the principal subject of this monograph, while the other is free from such difficulty, but is a case of mental deficiency, epilepsy, or psychotic disease.

In this material, by selection, at least one twin in each pair is affected by a child behavior difficulty, juvenile delinquency, or adult criminality; or any two of these, or all three, in succession. In many individuals thus affected there exists, in addition, a complication in the form of mental deficiency, epilepsy, or psychotic disease.

Accordingly, in the columns of Table I, headed *one affected*, are represented pairs of twins with one of each pair affected by one of the behavior difficulties, with or without any of the above listed complicating conditions, while the other is free not only from any of the behavior difficulties, but also from any of the complicating conditions. Only such cases will be referred to in this monograph as representing discordant findings. The remaining cases will be considered as indicating concordant findings. The concordance may be complete or partial; and in connection with cases representing partial concordance we shall endeavor, in subsequent sections, to take cognizance of both quantitative and qualitative intra-pair dissimilarities.

It will be seen from the figures in Table I that, for each of the clinical groups represented therein, as well as for the entire set of cases, the relative frequencies of concordant and discordant findings among monozygotic twins are in striking contrast with those among both same-sex and opposite-sex dizygotic twins, especially the latter. The frequencies of concordant findings, for the entire material, among the monozygotic, same-sex dizygotic, and opposite-sex twins, amount to 86.9, 41.7 and 29.3 per cent, respectively.

It appears, then, that our findings are roughly in harmony with those previously reported for criminal twins by Lange (7), Legras (8), Stumpf (15), and Kranz (6), as suggesting that *hereditary factors play a part in the etiology of the behavior difficulties under consideration*.

A most striking bit of evidence of hereditary factors in the determination of delinquency and criminality is presented by a few cases included in our collection, of monozygotic twins reared apart, yet presenting closely concordant findings.

In these cases (Nos. 76, 131, and 132), under widely separated and more or less dissimilar or even contrasted environmental conditions, prevailing from birth or from an early age, the antisocial manifestations were not only practically identical, both in kind and in amount, but also synchronous in the rhythm of their occurrence.

It is equally clear, however, that hereditary factors alone do not, in all cases, suffice to produce these conditions, for discordant findings are revealed in no less than 13.1 per cent of our cases of monozygotic twins.

As we shall see farther on, from a more detailed analysis of the material, there is another and very frequent finding—that of quantitative and qualitative intra-pair dissimilarities among monozygotic twins—which tends further to discount the importance of heredity in the etiology.

A third fact which obviously discounts still further the importance of hereditary factors is that of the high incidence of concordant findings among dizygotic twins. This is especially true of the juvenile delinquency group, but is quite striking in connection with the other groups as well. This finding points, of course, to nonhereditary factors, to the influence of which both twins of a pair—whether monozygotic or dizygotic—are often jointly exposed.

The magnitude of this finding can be evaluated by comparing it with the corresponding figures for singly-born siblings. Apparently the only data that are available for the purpose of such a comparison are those furnished by Humm (5) pertaining to adult criminality in male subjects.

Among 63 brothers of male criminal *propositi*, Humm found 15, or 23.8 per cent, with criminality or with some neuropsychiatric condition. Among their 61 sisters he found 7, or 11.5 per cent thus affected.

The corresponding percentages for dizygotic twin brothers and twin sisters of adult male criminal subjects in our material are 47.1 and 35.7, respectively, *i.e.*, relatively two and three times as high.

The genetic relationship existing between dizygotic twins is, of course, no closer than that between siblings. Accordingly, the enormous relative excess of concordance in dizygotic twins, as compared with singly-born siblings, can be attributed only to nonhereditary factors.

Finally, the figures in Table I indicate plainly that sex is a factor of the highest importance in the etiology of the various behavior disorders that are under consideration here. Of the total of 818 individuals included in our material 464 are males and 354 females. Among these there are 389 affected males and 241 affected females. Among the 280 individuals included in the opposite-sex group there

are 115 (82.1 per cent) affected males and but 66 (47.1 per cent) affected females, a relative excess of affected males amounting to 74.2 per cent.

These figures, striking as they are, do not tell the whole story. There are also profound differences in the kinds of behavior disorders that are characteristically observed in the two sexes, as will be shown in connection with a more detailed analysis of the material to be undertaken in subsequent sections.

§ 3. MONOZYGOTIC TWINS: MALE

Group 1. Child behavior difficulties, preneurotic and prepsychotic types; normal intelligence;¹ both affected, similarly. 8 cases: Nos. 1-8.

Case 1. G. twins, Richard and Robert. Born in Los Angeles, California, September 20, 1929. Observed by us in November, 1932, through the courtesy of the Los Angeles Child Guidance Clinic. The mother of these twins is herself one of a pair of opposite-sex twins; she weighed only 3 pounds at birth; her twin brother was larger; she is described as "a markedly inadequate person of low intelligence, who has little or no understanding of the emotional needs of the children and who seems to expect mature reactions from them." Pregnancy and delivery of the twins were difficult. Richard is $\frac{1}{4}$ inch taller and slightly heavier and is right-handed, while Robert is left-handed. They were nursed for four months, then put on bottle because mother did not have enough milk. There was much nutrition difficulty with vomiting, etc., during first year; then they were given blood transfusions and have greatly improved physically, but they have enlarged tonsils and are mouth breathers. Their mother brought them to the clinic mainly on account of persistent thumb-sucking which had begun in both at 8 months when they were taken off the bottle; she resorted to splints at the elbows in an attempt to break this habit. At the clinic they showed similar behavior, both were somewhat negativistic, did not respond to all of Kuhlman 2-year tests, refusing to imitate motions and unwrap candy. In a Stanford-Binet test they both attained an I. Q. of 96; their intelligence may be higher, however. Since the mother, upon advice at the clinic, has been ignoring the thumb-sucking it has been definitely diminished.

Case 2. M. twins, James and Gerald. Born in San Angelo, Texas, September 5, 1926. Our observation in November, 1931, through the courtesy of the San Diego County Bureau of Welfare, California. The father had recently become psychotic and was in the County Psychopathic Hospital on account of a persecutory trend. The paternal grandfather is also psychotic, but has not been institutionalized. The twins had recently recovered from chorea. At the time of our observation the main behavior difficulty was that they destroyed flowers, garbage pails, and anything left outside, and the

¹ Throughout this monograph the expression *normal intelligence* implies an I. Q. of 90 or over, or, in the absence of mental tests, a judgment to that effect.

neighbors complained of this repeatedly. In the home they cried a great deal. Another problem was addiction to masturbation. No record of a mental test.

Case 3. E. twins, Richard and Robert. Born in Santa Monica, California, October 23, 1924. Our observation in April, 1931, in one of the Los Angeles city schools. These boys had been referred to the Department of Psychology and Research for correction of their baby talk and their generally "immature manner and behavior." They were "the youngest children in the family and very much spoiled." Intelligence tests in October, 1930, revealed, for both, I. Q. 106.

Case 4. R. twins, Eugene and Leonard. Born in New York, December 4, 1923. Our observation in July, 1931, through the courtesy of the Institute for Child Guidance in New York. Mother was in poor health during pregnancy with the twins. Birth was at full term, but they were not robust, both had rickets at 3 years. At school they seem stupid, just sit with mouths open most of the time, apparently unable to learn to read, failing in studies, held back at promotion time; yet Stanford-Binet tests in 1929 revealed, for Eugene, I. Q. 102, for Leonard, 99. Both have enuresis, diurnal and nocturnal; they come home from school wet nearly every day; mother says they are too shy to ask permission to leave the room. When they failed to be promoted at midterm they truanted for two weeks. At home they are sullen, rude to family and neighbors, uncooperative, refuse to talk or to help in the work; quarrel, fight, and break up things, but always stick together against the rest of the world. They steal money from mother's purse to buy candy; do not admit the theft, but are indifferent as to the accusation. Eugene is somewhat the leader, Leonard the follower.

Case 5. G. twins, Marvin and Melvin. Born in Escondido, California, in 1921. Observed by us in December, 1931, in one of the Escondido public schools. No record of a mental test. They are a disciplinary problem at school because of quarrelsomeness and insubordination. They are constantly fighting with the other boys and, as they usually fight together, they often hurt the others badly, especially the smaller ones. They are impudent and defiant toward the teachers and are, naturally, very unpopular with the rest of the children. "No basis on which they could be appealed to has yet been found."

Case 6. H. twins, Willard and Willis. Born in California in 1921. Observed by us in the public school at Alpine, San Diego County, California, in December, 1931. No record of a mental test. They are generally together and their behavior is identical. The problem is "not so much viciousness as pranks." They knock books out of other children's hands; fill up the ink wells with trash; take screws out of seats, so that they collapse when sat upon; trip up pupils; fasten pins in the ends of their pencils and jab others; strew tacks over the state highway to watch the passing cars get tire punctures; on one occasion smashed a basket of eggs at the store "just to hear them crack." No reasoning or discipline seems

to have a deterrent effect. "They will promise solemnly not to do it again, but in less than five minutes have repeated the very same act."

Case 7. B. twins, Tom and Edward. Born in Chicago, Illinois, October 28, 1919. Our investigation in April, 1931, through the courtesy of the Los Angeles, California, Child Guidance Clinic. They were referred to the clinic by their foster mother, on account of poor showing at school, in January, 1930. Although over 10 years of age they were only in the third grade, and doing rather poorly; had repeated second grade. In other respects, too, they were "babyish" and dependent. Investigation revealed a discrepancy between their intelligence and educational achievement. Stanford-Binet tests in March, 1930, revealed, for Tom, I. Q. 97, for Edward, 94. Achievement tests revealed, for both, an Educational Quotient of but 81. They seemed to be much more interested and more competent in mechanical activities.

Case 8. L. twins, Milton and Nathan. Born November 14, 1918. Our observation in March, 1932, in the Mt. Vernon Junior High School, Los Angeles. Their problem consists in disorderliness in class, talking out, complaining of other pupils, expressing a feeling that they are not getting their rights, and clamoring for more attention. They are regarded as "jokes" by many of the other pupils and are teased considerably. Their tendency to complain of wrongs done them and to "tattle" on other pupils has made them very unpopular. They stand together against the other pupils. Mental tests in 1931 revealed, for Milton, I. Q. 106, for Nathan, 104.

Group 2. Child behavior difficulties, predelinquent types; normal intelligence; both affected, similarly. 4 cases: Nos. 9-12.

Case 9. D. twins, Chester and Clyde. Born in Madison, Indiana, May 9, 1920. Our investigation in June, 1931, through the courtesy of the Psychopathic Institute of the Jewish Hospital, Cincinnati, Ohio. These boys were admitted to the Institute together on January 21, 1931, mainly on account of persistent truancy. They had been brought up together in a poor environment. The father had been unemployed since the summer of 1930. The entire family of seven lived in two rooms in a slum neighborhood inhabited mainly by negroes. There was much bickering between the parents over the discipline of the twins, especially Chester, who seemed to be the leader in their misbehavior. On admission the boys were found to be slovenly, showing much ignorance or neglect of personal hygiene. In less than two weeks Chester escaped from the Institute three times, was at all times impertinent, did not respond to correction, was finally transferred to the Bureau of Juvenile Research on February 2, 1931, partly in order to separate him from Clyde, on whom he was judged to have a bad influence. Clyde, too, showed, on admission, a tendency to lie, cheat, and to be both disrespectful and cowardly; but it was evident that he was following Chester's initiative. He proved more amenable to discipline, did not run away, wanted others to have a good opinion of him. For two weeks following Chester's transfer to

Columbus Clyde remained at the Institute and was then returned to his home to be there under occasional supervision of the social worker of the Institute with provision for recreational outlets, etc. Thereafter there was no more truancy or other behavior difficulty. Stanford-Binet tests in 1930 revealed, for Chester, I. Q. 95, for Clyde, 98.

Case 10. B. twins, Raleigh and Ralph. Part Negro. Born in Watts, California, February 1, 1919. Our observation in the Jordan High School, Watts, in April, 1932. The trouble with these boys is stealing. They are both very dapper and their thefts have usually been of neckties and other articles of wearing apparel. Raleigh was arrested for attempting to steal a tie pin from a jeweler's. Ralph was not with him on that occasion, but usually they are together and both have been mixed up in all the other scrapes. Mental tests (Otis) in May, 1931, revealed, for Raleigh, I. Q. 109, for Ralph, 106.

Case 11. E. twins, Edward and Ernest. Part Indian (Mexican). Born in Mexico January 5, 1917. Our observation in Anaheim High School, California, in December, 1931. The main problem in the case of these boys has been that of truancy and gambling. The parents of other children have complained repeatedly to the school authorities that these boys have "fleeced" their sons out of lunch money by cajoling them into gambling games. The twins are always together and spend much of their time around pool halls. The truant officer has had to go there after them several times. Mental tests (Terman group) in 1930 revealed, for Edward, I. Q. 111, for Ernest, 108.

Case 12. B. twins, Kenneth and Keith. Born in Arizona, May 28, 1916. Our observation in Compton Junior High School, California, in November, 1931. Both boys have been problems in the school, but Keith was much the harder to deal with. There seemed to be no basis on which an appeal would reach him. Stealing, lying, swearing, truancy, and insubordination are the offenses listed against him. He had been suspended twice and was finally expelled in October, 1931, after which his father took him back to the ranch in Arizona. Kenneth was involved with Keith in several stealing escapades and, like his twin, tried to lie out of it. He was suspended once, but is more timid than Keith and never really defiant. Since Keith's expulsion and their consequent separation he has seemed morose and sullen, but not especially difficult. Mental tests (National) in 1928 revealed, for Kenneth, I. Q. 101, for Keith, 97.

Group 3. Juvenile delinquency; normal intelligence; both affected, similarly. 14 cases: Nos. 13-26.

Case 13. M. twins, Harold and Harry. Born in Peoria, Illinois, May 13, 1921. Our observation in July, 1932, through the courtesy of St. Charles School for Boys, Illinois. Mental tests in 1932 revealed, for Harold, I. Q. 95, for Harry, I. Q. 101. Their record of delinquencies begins on July 25, 1929, when Harry drove away a Ford truck which had been parked in the street; he was picked up by an officer. In July, 1930, Harold was brought in by the police for stealing a bicycle; the bicycle was then returned, but not intact, as he

had removed some parts. On October 9, 1930, the twins, together, again stole a bicycle. An experiment was then tried to give them an opportunity to earn money for a bicycle: they were to receive \$1 for every A they earned in their studies and \$1 a week for not missing school. Within two days, however, they were picked up by the police again with two stolen bicycles in their possession. On November 12, 1930, the twins broke a window valued at \$30. On March 16, 1931, Harry, in company with another boy, was arrested for destroying a pay-station telephone causing damage to the extent of \$37. On August 1, 1931, the twins were picked up for "borrowing" an automobile truck without permission. After that attempts were made to care for them in foster homes, but there was no improvement in their behavior. Finally, on April 15, 1932, they were committed to the School for Boys at St. Charles, Illinois. At the time of our observation of the case they were still inmates there.

Case 14. C. twins, Jack and Lee. Born in San Diego, California, March 9, 1920. Paternal grandfather was alcoholic. Father, as a boy, frequently ran away from home up to the age of 10 years, and then left permanently. He was 28 years old and the twins' mother was but 14 at the time of their marriage. Their domestic life was "miserable" on account of father's drinking, philandering, and failure properly to support the family. Eventually the parents were divorced and both remarried. Three older children went to live with the father, the twins with the mother. Maternal grandparents were divorced on account of failure to provide. The mother suffered from epileptic attacks which began after the birth of her first child, and she had seizures during her pregnancy with the twins. The three older children in the family have never been in any difficulty. The twins had been considered a behavior problem since the age of 4 years. They were physically frail and at the age of 7 years had to be placed in a preventorium. They have since been very troublesome both at home and at school, on account of persistent truancy, running away, irresponsible behavior, lying, petty stealing, chasing girls; also playing with little boys and even handling and kissing them. Lee has been considered the more troublesome and aggressive of the two, much more given to temper outbursts; yet one could not say that he was the leader, as they merely quarreled constantly between themselves when together. Mother filed a complaint in Juvenile Court first against Lee in September, 1930, then against Jack in October, 1931, for running away and being incorrigible and uncontrollable. They have both been in custody in Juvenile Hall, Los Angeles, and in the Boys' Industrial Home. Finally in April, 1932, they were ordered by the court to be placed in a foster home in Saugus, California, under supervision of the Probation Department. At the time of our investigation of the case, which was in September, 1932, they were still there. Mental tests in 1930 revealed, for both, I. Q. 97.

Case 15. C. twins, Stephen and James. Born in Toronto, Ontario, Canada, February 1, 1920. Our observation through the courtesy of the Victoria Industrial School at Mimico, Ontario, in August, 1932. The mother has to work for a living and the twins were raised first in a creche and later in various foster homes, but were finally

given up by their foster parents because of their mischievous and destructive tendencies. Although they have always been identical in appearance and often mistaken for each other, they are unlike in several respects: Stephen has had measles three times and has had running ears most of his life; has nocturnal enuresis; is a year behind James at school; seems to be the leader in their mischievous and delinquent behavior and the more troublesome of the two. James has had measles twice; no ear trouble; no enuresis; is more amenable and responsive. Mental tests in 1931 revealed, for Stephen, I. Q. 102, for James, 113. Their behavior difficulties have existed since early childhood. They are always together, yet always quarreling with each other. Described as noisy, impulsive, quick tempered, stubborn, unruly, not affectionate toward any one; holding grudges, disobedient, not dependable, resentful of authority, defiant; at school they "caused more trouble than all the rest of the boys put together." Finally, in February, 1931, they were arrested together for smashing store windows and stealing pop corn, candy, etc. On March 5, 1931, they were committed to the Victoria Industrial School, where they also proved as troublesome as they had been elsewhere. They were still there at the time of our investigation of the case in August, 1932.

Case 16. E. twins, Warriek and Douglas. Born in Pasadena, California, August 5, 1916. Our observation, through the courtesy of the Juvenile Probation Department, Los Angeles County, in September, 1932. Parents are divorced and the children are living with their mother in a pleasant home. The twins are fine appearing, lively boys, somewhat given to innocent pranks. In June, 1932, Warriek and three other boys were picked up by a police officer in Pasadena "for maliciously breaking a street light"; property damage amounted to \$5. This was the first trouble of a somewhat serious nature. Juvenile Court dismissed the case. Douglas said he had done the same sort of thing but didn't get caught. No record of a mental test, but they are judged to be of normal or superior intelligence, are in 10B grade at school, doing well in their studies.

Case 17. H. twins, Leo Max, Jr., and Frank J. Born in Butte, Montana, February 4, 1916. Our investigation in September, 1932, through the courtesy of the Los Angeles County Juvenile Probation Department. The twins' home environment is good, but they were disobedient and uncooperative and their school attendance was irregular. They were inseparable and "exactly alike in disposition, except that Leo has been the leader of the two." Leo was the first to come to the attention of the Juvenile Court, in March, 1932, for reckless driving through an intersection and narrowly averting an accident; his driver's license was taken away and he was granted probation. His second arrest was in May, 1932, for stealing a clock from an automobile; again granted probation. In August, 1932, the twins were arrested together for stealing a Ford coupe and dismantling it; they were charged with grand theft and again granted probation. Our follow-up investigation in the spring of 1933 revealed that in January, 1933, the twins, together with their brother and two other boys, were arrested again for stealing two roadsters, a Chrysler and a Chevrolet, and stripping them of parts and accessories which they

sold. They were then, on January 23, 1933, both committed to Preston School of Industry at Ione, California, for the period of their minority. Frank, though reported to be under Leo's influence, had been delinquent on his own account as well. In May, 1932, he was reported stealing from school shop on at least three occasions; the stolen articles were later found at his home where he had hidden them. A mental test in 1933 revealed, for Leo, I. Q. 101. There is no record of a mental test in Frank's case, but he was in the same class with Leo (11A) and his scholastic record was about the same.

Case 18. H. twins, Roger and Tom. Born in Sydney, Australia, April 9, 1914. Our investigation in June, 1931, through the courtesy of Judge H. C. Shaw, Juvenile Court, Vancouver, British Columbia, Canada. These boys committed various delinquent acts together and separately, even when living apart. They were together in the Detention Home and before the Juvenile Court at Vancouver in October, 1927, and in February and May, 1929, the first time for stealing bicycles and the second and third times for stealing cars. After that Tom was before the court again in March, 1930, for breaking and entering; August, 1930, for breaking, entering, and stealing; and December, 1930, also for breaking, entering, and stealing. On the last occasion he was committed to the Provincial Industrial School and, at the time of our investigation, was still an inmate there. Roger, after three appearances before the Juvenile Court together with Tom, was before the court again in February and in May, 1931, both times for automobile thefts. On the last occasion the judge informed him that for any further violation of probation he would also be committed to the Industrial School. At the time of our investigation he was still at large under court supervision. There is no record of any mental test for either twin.

Case 19. K. twins, Harold and Harvey. Born in Chicago, July 11, 1915. Our investigation in September, 1932, through the courtesy of the Los Angeles County, California, Juvenile Probation Department. Father is of delicate health; he and two older brothers of the twins are living in Chicago. Mother is nervous, lives with the twins and two other brothers in California; one of these brothers has tuberculosis, the other is anemic; the twins have hay fever and asthma. Thus, the family is divided, but only for health reasons. Harold, as a young baby, was extremely delicate, "carried on a pillow for nine months," is said to have had gastric ulcer. From this he recovered, and thereafter the twins presented an identical appearance and were constantly confused. At 7 years Harold had whooping cough complicated with convulsions. Upon recovery he developed a tendency toward severe headaches. At 15 years Harold had an appendectomy, following which he gained weight, so that at the time of our observation the twins could easily be told apart on account of Harold's being the stouter. They presented no problem at school, were in the ninth grade, mental tests given at school revealed, for both, I. Q. 90. Their behavior difficulties were mild and temporary, developing first in Harvey at the age of 16 years. He became rather troublesome and unmanageable at home and "worried his parents a great deal"; but he was never

before Juvenile Court. On May 13, 1931, Harold was arrested and placed in Juvenile Hall on a charge of playing sexually with a 5-year old girl in a toilet, where he had induced her to come with him by promising to give her some ice cream. He remained in Juvenile Hall for nine days; was committed to the Preston School of Industry at Ione, California, but was granted a stay of execution, pending probation at home. This episode gave both twins "quite a jolt," their behavior improved greatly, and, at the time of our investigation of the case, both were at home and "getting along splendidly."

Case 20. R. twins, Ernest and Jack. Born in Victoria, British Columbia, Canada, September 10, 1913. Our investigation in May, 1931, through the courtesy of the Boys' Industrial School at Coquitlam, British Columbia. The mother of these boys died when they were six months old. The father has tuberculosis and is in a hospital most of the time. The twins were placed in the Providence Orphanage at Victoria after their mother died and lived there together for eleven years, presenting no problem. For several years thereafter they worked at odd jobs. On March 6, 1930, Ernest was committed to the Boys' Industrial School for forging checks; and he was still an inmate there at the time of our investigation of the case. This was his first offense and he was sent to the institution "as much for a home and care as anything else." Jack joined the British Navy when he was 16 years old, but soon deserted, was absent without leave for about six months. He was then apprehended and sentenced to the Navy Detention Barracks where he served a term of 60 days in the latter part of 1930. No record of a mental test for either twin.

Case 21. D. twins, Ralph J. and Robert. Born in Valley Junction, Iowa, December 8, 1914. Our investigation in December, 1932, through the courtesy of the State Reformatory at Hutchinson, Kansas. The case history is very meager. Robert is right-handed, Ralph is left-handed. No record of a mental test for either twin. All their delinquencies were committed jointly. In 1922, when barely 8 years of age, they were committed to the State Industrial School at Topeka, Kansas, for horse stealing. After several months there they were tried on parole, but violated parole repeatedly and had to be returned. They escaped from the institution many times. With such interruptions they were in the institution altogether 21 months. In 1932 they burglarized a clothing store in Topeka, stealing \$165 worth of property, and were committed for a term of 5 to 10 years to the State Reformatory at Hutchinson. At the time of our investigation they were still inmates there.

Case 22. N. twins, Lawrence and Charles. Part Indian. Born in El Paso, Texas, November 19, 1913. Our observation in September, 1932, through the courtesy of the Los Angeles County, California, Juvenile Probation Department. In January, 1932, Lawrence was arrested and placed in Juvenile Hall, where he remained, pending lengthy investigation and hearings, until April. On the testimony of a girl in the neighborhood he was charged with being the father of her illegitimate child. Paternity could not be proved, however, as the girl had had other "boy friends," and, as between the two

twins, it could not be ascertained which might have been the father, as they had both been involved. Charles stated, "I just want to say that on March 20, when Lawrence was supposed to be over there, he wasn't. It was me, but the neighbors don't know the difference because we look alike." The case was finally dismissed—"paternity not established." The boys had been in no other difficulty at home, at school, or elsewhere. No record of a mental test for either twin.

Case 23. C. twins, James Hall and Joe. Born in San Francisco, California, March 22, 1912. Our investigation in November, 1931, through the courtesy of the San Diego County, California, Probation Department. These boys committed numerous delinquencies both together and separately, often in company with one or two other delinquent boys in the neighborhood. Parents divorced on account of father's intemperance. The twins are fine-appearing, seemingly well-mannered, intelligent boys. No record of a mental test for either twin. Aside from irregular school attendance these boys are not known to have been in serious difficulty until October 15, 1927, when their delinquencies began. On that day James turned in false fire alarms; later partly confessed, but tried to throw the blame on another boy. A week later the twins entered an unfinished house and stole some carpenter's tools. On April 8, 1928, Joe stole a bicycle from in front of a theater, took it home, and, in company with James and another boy, attempted to disguise it by painting it and removing mud guards and carrier. On April 21, 1928, Joe was reported for attempted theft of an automobile tire. On January 30, 1929, James was before the court on charge of reckless driving and a collision. On April 15, 1929, Joe was reported for an attempt to cross the Mexican line to Tia Juana; on that and some previous occasions he gave his age as 21 years. On May 21, July 21, and August 6, 1929, James was before the court for speeding and violation of other traffic regulations, and his driver's license was taken away. On August 14, 1929, James was ordered to be placed in the Juvenile Detention Home for repeated violation of probation by deliberately withholding from the authorities his transfer papers on which the record of his previous delinquencies appeared; on reaching the Detention Home he jumped from the automobile and ran away. On August 30, 1929, James, together with two other boys, stole two airplane radiators and sold them to a junk dealer for \$13.92. On September 4, 1929, he was apprehended by the police and placed in the Detention Home. On September 19, 1929, Joe was reported as one of a gang of boys involved in stealing an automobile radiator. On the night before, he and another boy had been picked up by the police at a late hour, as they had been acting in a suspicious way and had in their possession a flashlight and four skeleton keys. On October 2, 1929, Joe, together with another boy, was seen by an officer to come up and inspect several cars parked in the street, finally entering a new Chrysler car, switching lights on and off several times, and then stepping on the starter; whereupon they were arrested. On October 23, 1929, James was released from the Detention Home to take a job, as he had made a perfect record there for seven weeks. On November 3, 1929, the twins, together with another boy, stole a fur-trimmed coat from a locked automobile; also a pair of valuable gauntlet gloves from a motorcycle; sold them for \$3.

On November 13, 1929, they were committed to the Preston School of Industry at Ione, California. They remained there until January 22, 1931, when, having made a good record at the institution, they were released on parole and placed in jobs. At the time of our investigation of the case (November, 1931) they were working as clerks in a department store in Los Angeles and apparently getting along well.

Case 24. T. twins, Roy and Raymond. Born in Park Rapids, Minnesota, May 7, 1911. Our investigation in May, 1931, through the courtesy of the State Training School for Boys, Chehalis, Washington. The mother was once arrested for making beer; on another occasion she had a mental breakdown and was for a time a patient in the state hospital at Fort Steilacoom, Washington. An older brother had also been a juvenile delinquent and an inmate of the State Training School for Boys. A sister, also delinquent, had been in a girls' parental school. The twins are of superior intelligence; a mental test of Roy in 1922, revealed I. Q. 122; no record of a mental test in Raymond's case. They had presented behavior difficulties and delinquent tendencies from an early age. Roy had been before the court eight times: six times for stealing, once for disorderly conduct, and the last time for being one of a group of boys who assaulted and dangerously hurt a Western Union messenger boy. Raymond had a record of two arrests for truancy, four for disorderly conduct, and three for stealing. His last arrest was for being involved in slugging and robbing a man. Both boys had been in a boys' parental school from September, 1922, to September, 1923. Finally both were committed to the State Training School for Boys at Chehalis, Washington, where Roy remained from February 18, 1927, to April 7, 1928; and Raymond from December 19, 1927, to November 28, 1928. At the time of our investigation of the case (May, 1931) both were apparently getting along well, Roy at work on a job and Raymond in the U. S. Navy.

Case 25. K. twins, Anthony and Chester. Born in Nanticoke, Pennsylvania, July 4, 1911. Our observation in July, 1932, through the courtesy of Eastern State Penitentiary at Philadelphia, Pennsylvania. Both twins showed the predelinquent type of behavior difficulty in childhood and adolescence; they were persistent truants and Chester was at one time expelled for truancy. They did poorly in studies, attained but the sixth and seventh grades, respectively, though not considered to be of subnormal intelligence. There is no record of a mental test for either twin. Chester married at 17 years, "settled down," now has two children, has always supported his family, and has not been in conflict with authorities, although Anthony said, "He was just about like me, only slicker." Anthony never married, and so "did not settle down." He first got into trouble in 1925 for breaking into a roadhouse; was then fined and dismissed. In December, 1928, he was arrested for breaking and entering a hardware store. Although he obtained "only a few dollars," he was sentenced on December 28, 1928, to the Eastern State Penitentiary to serve from 5 to 10 years. At the time of our observation of the case he was still an inmate there.

Case 26. H. twins, Caldwell and Abram. Part Chinese. Born in United States in 1903. Our investigation in August, 1932, through the courtesy of the Berkeley, California, Police Department. Parents were very wealthy and spent much money in getting the twins out of their many scrapes. The police record dates back to June 21, 1918, when Caldwell, in company with two other boys, was reported for stealing cherries. On May 22, 1920, both twins, working separately, each without the other's knowledge, in company with several other boys, entered some houses and stole a quantity of wine. Father later paid for the stolen property. On September 13, 1921, the mother of the twins reported a burglary in their home; investigation directed suspicion to the twins, whereupon the parents quashed further proceedings. On January 16, 1922, Abram passed a bad check in payment of debts in a pool hall. The parents made good for the amount of the check. On July 15, 1922, there was another dispute about money which Abram had borrowed on a guitar. The parents again made good. On October 22, 1930, Abram was found to be associating with a notorious homosexual; placed on police probation. The last reports were of a fairly satisfactory adjustment of both twins—Abram as secretary to a well-known prize fighter, Caldwell in a financial business. No record of a mental test for either twin, but they were judged to be of at least average intelligence.

Group 4. Adult criminality; normal intelligence; both affected, similarly. 15 cases: Nos. 27-41.

Case 27. S. twins, Benjamin and Joseph. Born in Walla Walla, Washington, November 18, 1912. Our investigation in May, 1931, through the courtesy of the State Reformatory at Monroe, Washington. These boys were committed together to the State Training School for Boys at Chehalis, Washington, on December 23, 1925, for larceny and burglary. On May 31, 1927, they were both granted parole. Since then Joseph developed an abdominal tumor, was operated on, and thereafter remained pale, thin, weak, stooped over, and could do nothing but a little light work around the house. There has been no further record of delinquency or criminality in his case. Benjamin, however, has remained well physically. On February 19, 1929, he was returned to the State Training School for parole violation consisting of running away from home and attempted forgery. He was again paroled on March 18, 1930. About a year later, on March 5, 1931, he was sentenced for a term of 1 to 5 years to the State Reformatory at Monroe, Washington, for forgery of checks; at the time of our investigation he was still an inmate there. He said: "I forged and cashed three checks at Pasco, Washington, for a total of about \$75. I then beat it to Vancouver, Washington, but was arrested when I came back to Pasco." A mental test in April, 1931, revealed for Benjamin, I.Q. 94. No record of a mental test in Joseph's case, but they have appeared to be of about the same degree of intelligence.

Case 28. M. twins, Steve and William. Born in Cleveland, Ohio, January 2, 1911. Our observation in July, 1932, through the courtesy of the State Reformatory at Mansfield, Ohio. History very scant. No

record of any mental test. Both twins are dairy farmers. They were first arrested together in 1930 for automobile theft and put on two years' probation. Within less than a year they violated probation together by breaking and entering a filling station and stealing \$17 out of the cash register. For this they were sentenced to the State Reformatory on June 1, 1931. At the time of our observation of the case they were still inmates there.

Case 29. A. twins, Sigred and Hilbert. Born in Omaha, Nebraska, April 29, 1910. Our observation in July, 1932, at the State Reformatory, Mansfield, Ohio. History very meager; no record of mental tests. According to official records criminal tendency has been much more marked in Sigred's than in Hilbert's case. They committed their offenses independently of one another. Sigred was first arrested at the age of 15 years in Elgin, Illinois, for being out late at night; was held overnight in jail and then released. His second arrest was two years later in Amarillo, Texas, for vagrancy; served 25 days in jail. On August 24, 25, 28, and 30, 1928, he committed a series of robberies of gas stations in Cleveland, Ohio, holding up the attendants with a gun, and taking money in amounts of from \$42 to \$69. For this he was sentenced to the Ohio State Reformatory on October 10, 1928. On June 1, 1931, he was granted parole, but on November 11, 1931, was returned for violation of parole consisting in carrying a concealed weapon. At the time of our observation of the case he was still an inmate there. The parents were separated when the boys were in their 'teens, leaving them to shift for themselves. Hilbert joined the Navy at 17 years, served 3 years, and received an honorable discharge. There seems to be no police or court record in his case until the latter part of 1931 when he committed a robbery for which, on December 10, 1931, he was sentenced to the Ohio State Reformatory. At the time of our investigation of the case he was still an inmate there.

Case 30. H. twins, Raymond B. and Edmund W. Born in Pima, Arizona, December 17, 1909. Our investigation in December, 1932, through the courtesy of the State Identification Bureau at Sacramento, California. These boys seem to have started in childhood toward a career of professional crime. They were beyond their parents' control, were persistent truants from school, and soon drifted into serious delinquencies. At 15 years they defrauded a hotel in Los Angeles, working together; later passed bad checks, stole an automobile and stripped it, etc. At 17 years they were committed together to the Preston School of Industry at Ione, California, for robbery. Since then, working separately for the most part and under various aliases, they have been in trouble many times in the states of California, Oklahoma, and Washington, on account of burglary, possession of stolen property, automobile theft, grand theft, robbery, drunkenness, etc. Finally, on January 28, 1932, Edmund was sentenced to serve from 7 to 20 years in the State Penitentiary at Walla Walla, Washington, for robbery. About a year prior to that Raymond had been sentenced to San Quentin Prison, California, for grand theft. At the time of our investigation they were still inmates in these institutions.

Case 31. A. twins, Edward and Frank. Born in Everett, Massachusetts, November 2, 1906. Our investigation in August, 1932, through the courtesy of the State Department of Correction, Boston, Massachusetts. Mother states the twins were inseparable and were generally involved in misconduct together. However, their records also show delinquencies committed separately. The father died in 1922 and from then until the mother's remarriage in 1928 the twins lived with different relatives. The probation officers attribute the difficulties to "lack of parental supervision and living in a poor neighborhood." Edward's record of delinquencies begins at the age of 9 years when he was committed to the Middlesex County Training School as "a stubborn child." He has since been before the courts in September, 1922, April, 1924, May, 1924, and June, 1925, for intimidating witnesses, assault and battery, assault and rape, etc. Both boys had married young and on the same date, lived with their wives but a short time, are now divorced. Edward has a daughter who was put out for adoption. Frank's record of delinquencies begins in November, 1916, with breaking, entering, and larceny. This was followed by arrests in December, 1916, and January, 1917, for truancy, larceny, etc. On May 2, 1917, upon violation of probation, he was committed to the Middlesex County Training School. Following his release from there his record shows arrests in November, 1923, May and October, 1924, and May, 1925, for non-support, assault and battery, lewd and lascivious conduct, speeding, etc. Finally on February 26, 1926, both twins were sentenced to the Massachusetts State Reformatory for rape committed by them jointly upon a girl whom they were to escort home. On October 27, 1930, they were granted parole and, as far as known, Frank has been in no further difficulty since then. Edward, on the other hand, has not done so well. In February, 1932, he obtained permission from his parole officer to go to Manchester, New Hampshire, ostensibly on an errand for his employer. Instead he went to Nashua, New Hampshire, where he married a feeble-minded woman who bore a child one month later; she had had a child previously by a Chinaman. This marriage took place before his divorce decree from his first wife had become final. For this he was rearrested upon his return to Massachusetts in April, 1932, but was continued on parole. In June, 1932, he left his home and his employment in company with a married woman who abandoned her husband and four children in order to elope with him. At the time of our investigation of the case neither Edward nor the woman who had eloped with him had been heard from.

Case 32. O'H. twins, Robert and Roy. Born in Nebraska City, Nebraska, May 26, 1906. Our observation in September, 1932, and again in January, 1934, through the courtesy of the Los Angeles County, California, Probation Department. The father died of tuberculosis when the twins were quite young. Although the mother remarried later, the twins were brought up not by her but partly by their grandparents and partly by other relatives. They were judged to be of normal intelligence (no record of a mental test for either twin), but did poorly in their studies, reaching but the eighth grade at the age of 17 years, when they left to go to work. During their school

years they had a record of persistent truancy for which they had to be brought into the Juvenile Court. They were millwrights, employed in the same place. Although there is no police or court record in their cases up to 1927, other than the above-mentioned difficulty on account of truancy and, in Roy's case, an arrest in 1921 for running away from home, their reputation where they lived was that of "a pair of wild ones." In 1927, Robert was arrested for carrying a concealed weapon, sentenced to 90 days in jail; sentence was suspended and he was placed on probation. In 1929, they were arrested together for receiving stolen property (radio, worth \$15). They were in the county jail one month pending their hearing, finally entered a plea of guilty and were granted probation for a period of 5 years. There is no record of further difficulty from then until September, 1933, when they were arrested together on a charge of grand theft (automobile) and receiving stolen property. Investigation revealed that in January, 1933, they opened an automobile wrecking yard as a blind for "a racket" of automobile thefts on a large scale. They would buy cars ready to be junked and thus obtain "pink slips" and license plates. Then they or their confederates would steal good cars of similar model, substitute the engine numbers and license plates of the junked cars, and then sell them with the use of the "pink slips" and license plates obtained as above, thus making the sale appear as a legitimate transaction. Although they knew that according to the practice of the courts they were not entitled to probation this time on account of their previous record, they made a plea for special consideration and leniency on the ground that they had turned state's evidence and assisted in the apprehension of other men involved with them in their "racket" as members of the car-stealing ring. The recommendation of the Probation Department to the Court was against such leniency.

Case 33. M. twins, Harold and Orvis. Born in Reno, Nevada, September 28, 1901. Our observation in July, 1932, through the courtesy of the Eastern State Penitentiary in Philadelphia, Pennsylvania, and the Police Department of Reno, Nevada. At school Harold played hookey habitually, had trouble with some of his teachers, "stole a few things as a youngster." At 15 years he was in court for stealing a tire from an automobile, was dismissed with a warning; "has been living by his wits off and on ever since"; was in Reno city jail in January, 1917, for burglary, in February, 1922, for bootlegging, and in March, 1922, for petty larceny; was also in Reno county jail in 1929 for burglary. There were other arrests for minor offenses. Was divorced by his wife. Finally, on April 25, 1932, he was sentenced for 10 to 20 years to the Eastern State Penitentiary, Pennsylvania, for robbery, and was an inmate there at the time of our investigation of the case. Orvis' criminality has been much less marked. There was no truancy; first marriage was unsuccessful and lasted only a few months; but he has been married to his second wife for over 10 years, has worked steadily and has always supported his family. In March, 1918, he was in the Reno city jail for drunkenness and was given 1 year's probation. In May, 1932, he was again in trouble, this time with the Federal Government, on account of selling liquor to Indians. Reno Police Sergeant told us "he does not bear a good reputation in the community; constantly does things

just on the borderline of crime; we keep our eyes on him." No record of a mental test for either twin.

Case 34. U. twins, James and John. Born in Ontario, Canada, in 1901. These boys came of a good working-class family, and the mother is described as a really superior person. They were the only children. From an early age, however, they were in trouble almost continually and always together on account of truancy, petty thefts, etc. They used their identical appearance often to try to establish alibis. They were together in the Ottawa jail from June to September, 1915, and again from January to July, 1918, for shopbreaking. Their last offense, in April, 1920, was killing the policeman who caught them shopbreaking again; both admitted firing at him. They were given life sentences in the Dominion Penitentiary at Kingston. During their first few months in prison they were unruly; but almost suddenly and simultaneously they straightened up and started to work. Both took advantage of the educational opportunities offered at the Penitentiary and have won university degrees. At the time of our observation, which was in August, 1932, James was teaching Spanish to other students in prison and John was teaching mechanical drawing. Both are excellent mechanics and have rendered valuable service at the prison. The Inspector "can not speak highly enough of them"; said, "We could hardly get on without them now."

Case 35. D'A. twins, Ray and Roy. Born in Williamsburg, Iowa, March 31, 1900. Our investigation in June, 1931, through the courtesy of the State Penitentiary at Salem, Oregon. The case history is very meager and there is no record of a mental test for either twin. Ray has a record of serving four days in jail at Milford, Utah, at the age of 17 years, for vagrancy; also two years at the State Reform School at Monroe, Washington, 1919-1921. Roy has no prior record. On June 24, 1927, both twins together with an older brother were sentenced for life to the Oregon State Penitentiary for murder which all three had planned and participated in.

Case 36. A. twins, Thomas and Leo. Born in Philadelphia, Pennsylvania, September 30, 1897. Our investigation in July, 1932, through the courtesy of Eastern State Penitentiary in Philadelphia. Both twins were habitual truants and otherwise troublesome at school; however, they finished the seventh grade. No record of mental tests for either. According to the records, probably incomplete, Thomas was first in court at 14 years for theft, but was released on probation after a few days in the House of Detention. In 1915 he served 6 months in the Philadelphia County House of Correction at Holmesburg for breaking into a store and petty larceny; then 9 months in the same institution in 1918 for automobile theft. In 1929 he was involved in killing a boy in an automobile accident, was arrested on a charge of involuntary manslaughter, was in the Philadelphia county jail for 4 months pending investigation, but the case was dismissed at the end of that time. In the meantime this episode caused the breaking up of his home, he became embittered and desperate and thereafter "did not care." He never worked consistently. Finally, in 1931 he was sentenced for 2 years to the Eastern State Penitentiary for hold-up and robbery, and was still an inmate there at the time of

our investigation of the case. Leo was a petty thief as a boy; never worked consistently; stole many things for which he was not detected and punished; was in the Philadelphia County House of Correction in 1919 for automobile theft, and again in 1929 for burglary. He died in May, 1932.

Case 37. C. twins, Elgin and Ernest. Negroes. Born in Richland, Georgia, January 5, 1896. Our investigation in March, 1931, through the courtesy of San Quentin Prison, California. The case history is very meager and there is no record of a mental test for either twin. Both are single, cook and waiter by occupation. In the early part of 1920 they were charged with murder; technically one of them was chargeable with first-degree murder and the other with second-degree, but it was not known which did the actual shooting. No one could tell them apart; even their finger prints are identical in all major lines and can be distinguished only through the minor lines. Neither would tell on the other, so neither received the death sentence, but both were given life sentences, Elgin on July 17, 1920, and Ernest on October 21, 1920. Neither had a prior record as far as known.

Case 38. K. twins, Frank and John. Born in Armenia, October 28, 1895. Came to this country as young children with their parents, four brothers and six sisters. Both have records of constant delinquency and criminality dating from childhood. The records are badly mixed on account of their identical appearance and their use of about twenty aliases. Frank has been an inmate of Whittier, California, State School; State Penitentiary at Huntsville, Texas; Folsom Prison, at Represa, California; Fresno County, California, jail; San Quentin Prison, California; and again in Folsom Prison, California, where he finally died of tuberculosis on September 12, 1926. His crimes consisted in burglary, robbery, forgery, safe blowing, and assault to commit murder. Most of the delinquencies and crimes of these twins were committed separately, and most of the time they lived apart. John was an inmate, in his childhood and adolescence, of the State School at Whittier, California, and the Preston School of Industry at Ione, California, for burglaries. Since then he has been an inmate of the following penal institutions for periods of from one month to three years: twice in San Quentin Prison, California; Sacramento county jail, California; Folsom Prison at Represa, California, twice; Los Angeles county jail, California, three times; San Joaquin county jail, California; Iron county jail, Parowan, Utah; Salt Lake City jail, Utah; for the following offenses: burglaries, vagrancy, sodomy, robberies, automobile theft. Finally, in the latter part of 1930 he committed highway robbery in Las Vegas, Nevada, which led to his being sentenced for 5 to 20 years to the State Prison at Carson City, Nevada. At the time of our investigation of the case, which was in December, 1932, he was still an inmate there.

Case 39. L. twins, Mace Elgin and Elija Claude. Born in North Carolina, February 2, 1894. Our investigation in December, 1932, through the courtesy of the Orange County jail at Santa Ana, California. Nothing is known of these men other than their two arrests, as transients, for petty offenses in February, 1921, and in October,

1930. The first time they served 30 days for trespassing (riding on freight cars); the second time 7 days for drunkenness and illegal possession of liquor.

Case 40. W. twins, Theodore and Albert. Born in Olney, Illinois, July 18, 1889. Our investigation in July, 1932, through the courtesy of Eastern State Penitentiary at Philadelphia, Pennsylvania. Both were very troublesome at school, failed in deportment repeatedly, beat up their teachers. Although they were physically indistinguishable, except by a birthmark, and both were criminally inclined, there seemed to be a marked difference between them in sexual make-up. Theodore seemed to be highly sexed, was involved in a number of sex offenses beginning at the age of 15 years or before, was married and divorced twice, and has lived with several women besides; whereas Albert never had much interest in girls, never married, and has no record of sex offenses. Theodore's institutional record began in 1903 with a term of 14 months in St. Charles School for Boys, Illinois, for "incurability." He served 1 year in the Illinois State Reformatory at Pontiac in 1904 for sex delinquency; was sentenced for 5 years (served 3 years) to the Southern Illinois Penitentiary in 1904 for a statutory sex offense; served 6 months in the Illinois State Penitentiary in 1912 for a hold-up; then 6 months again in 1913 in jail in Minneapolis, Minnesota, as a "suspicious character"; and finally was sentenced for another sex offense for 5 to 10 years, in 1930, to the Eastern State Penitentiary in Philadelphia, Pennsylvania. At the time of our investigation of the case he was still an inmate there. This record is admittedly incomplete, especially as to the interval from 1913 to 1930; he is said to have committed "innumerable" crimes and to have been arrested many times. Albert's case record is even less complete. He was a drinker and a gambler, had been arrested several times, and, when last heard from, was serving a sentence in the Illinois State Reformatory at Pontiac in 1913.

Case 41. M. twins, Alexander and John S. Born in Scotland, August 11, 1886. Our investigation in November, 1932, through the courtesy of Sing Sing Prison, Ossining, New York. These men received their schooling in Scotland, served in the British Army during the World War and attained the rank of captain. Their history prior to coming to this country is known only as stated by them; they denied any previous delinquencies or crimes. Although they are physically almost indistinguishable and of equal intelligence (mental tests in August, 1930, revealed, for both, I. Q. 100), there is considerable temperamental difference between them. They have both been employed as salesmen for a check-writer company; Alexander has been known to his employers as unreliable, dishonest, and scheming, but an excellent salesman; whereas John has been considered honest and reliable, but not so good a salesman. Alexander has also been the leader in crime. According to the case history that was furnished to us, Alexander was the first to get in trouble. He was dismissed by his employers for stealing some check-writing machines and pawning them. John made restitution and thus saved Alexander from prosecution. Alexander then started a jute business, and involved both himself and John in crooked finance by opening a number of bank accounts under

fictitious names by passing forged checks. On July 30, 1928, they were both sentenced to Sing Sing Prison, Ossining, New York. In prison Alexander specialized as a "stool-pigeon," furnished evidence which sent one man to the electric chair, was state's evidence in many other cases, and, in consideration for these services, was granted parole on December 23, 1930; whereas John was not released until July 8, 1932. Upon release from prison Alexander resumed his practice of check forgeries, but was dealt with leniently because he continued to render valuable service to the police as a "stool-pigeon." Finally, however, he was again arrested for forgery and placed in the 53d Street jail, New York City, and was there, awaiting trial, at the time of our investigation of the case. He was not sent to the main city jail as there were many men there who wanted to "get him" on account of his "stool-pigeon" activities. On the other hand, John, upon his release, obtained a position and was "going straight" not only according to his own statement, but also that of the parole officer on the case.

Group 5. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; both affected, similarly. 6 cases: Nos. 42-47.

Case 42. D. twins, Mortimer and Maurice. Born in Mexico (of white parents) in 1925. Observed by us in October, 1931, in one of the Long Beach, California, city schools. Very marked baby talk, "have a language all their own." Stanford-Binet tests in 1931 revealed, for Mortimer, I. Q. 84, for Maurice, 82. Their principal problem seemed to be based on extreme emotional instability. They were "always flying off the handle in a violent rage over the merest trifles; also would shout with joy when anything pleased them." Constantly fighting with the other children, standing together against all the rest. Showed a cruel streak; would stand around and shout with glee when anyone was hurt; would plague and hurt animals; one day tore a live bird apart. Finally had to be transferred to a semiprivate school.

Case 43. P. twins, Reno and Joe. Born in Oakland, California, September 22, 1925. At the time of our observation of the case, which was in April, 1932, they were in the first grade in the Dewey School, Oakland. They had spent three terms in the kindergarten; in class they "just stand around," being extremely shy. The kindergarten teacher said she had not heard either of them speak once during their three terms there. They appropriate anything they can lay their hands on; if spoken to they become frightened and cry or run off. They take no interest in anything that goes on about them. A Pintner-Cunningham test in January, 1932, revealed, for Reno, score 6, for Joe, 9; i.e., both in "Group E," corresponding to I. Q. below 70. We have classified the case as one of mental deficiency complicated with schizoid traits and behavior difficulty.

Case 44. E. twins, Pete and Jack. Born in California in 1924. Observed by us in September, 1931, in the kindergarten class of one of the Seal Beach, California, city schools. The father is a laborer, economic condition poor, the children are undernourished and unkempt.

The mother is "queer," dominating, aggressive, loud-voiced, threatening, "explosive," i.e., given to sudden outbursts of temper. Although there is no record of a mental test for either twin, they are judged to be of subnormal intelligence, can not seem to advance beyond the kindergarten grade, are the oldest and largest children in their class where their younger sister is also a pupil. They both have a speech defect, being unable to speak distinctly. Their principal behavior difficulty is masturbation which is almost continuous both in class and on the playground. It is hard to get them to participate in games as they seem to prefer to sit around and masturbate. Both have a marked "fear complex," jump and look scared every time the teacher speaks to them. They are inseparable, do the same things together, pick on the smaller children, fight together against the other children; when one is punished or reproved, the other howls. Jack seems to be the more amenable; while Pete would be stubborn and fail to respond to appeals from the teacher, Jack could be influenced in this way, and then Pete would do whatever Jack did. They seem to be very fond of their younger sister toward whom they have a protective attitude.

Case 45. J. twins, Henry and Edward. Born in Santa Maria, California, March 31, 1921. Our observation in April, 1931, in the Lomita, California, city school. The father is dead, the mother deserted, and the twins are being raised by their grandmother. They were both markedly underweight at birth, Edward weighing 3 pounds and Henry 4 pounds. Edward was very weak at birth and it was doubted for a time whether he would live. Both had "spasms" up to the age of 6 years. Both are retarded at school, Edward the more so, being in the low-second grade, while Henry is in the high second. Mental tests in 1930 revealed, for Edward, I. Q. 83, for Henry, 89. Their behavior difficulty consists in fighting, breaking regulations, emotional instability, crying on the slightest pretext, resenting punishment tempestuously, etc. This difficulty is distinctly more marked in Edward's case, who is described as having "a terrible temper," sullen and uncooperative, whereas Henry "will work very hard for praise or small reward."

Case 46. H. twins, Mervin and Mearl. Born in Sutton, Nebraska, January 27, 1915. Our observation in September, 1931, in the Polytechnic High School, Long Beach, California. Although these boys are practically identical physically and temperamentally, there is a marked contrast between them in intelligence and in educational achievement. Stanford-Binet tests in September, 1930, revealed, for Mervin, I. Q. 75, for Mearl, 98. Mearl had done good passing work in school, while Mervin, last semester, failed in every subject except gymnasium. Both boys are markedly schizoid and paranoid. They are extremely attached to each other and would associate with no one else. A great turmoil arose when, by reason of his inability to do regular high school work, Mervin was put in a special opportunity class. Both boys rebelled violently against this, began to "ditch" classes, and their parents, who seem also to be paranoid, upheld them in this. In all interviews concerning this matter complaints of persecution and unfair discrimination were constantly reiterated, the whole world was

against them, exploiting and insulting them, the school was blamed for Mervin's failure, the teachers were accused of picking on the twins, and both boys, with the encouragement of their parents, were sulky and uncooperative.

Case 47. J. twins, Alfred and William. Born in Yetten, California, of Armenian parents, September 20, 1911. Our observation in August, 1930, through the courtesy of the Church Federation of Los Angeles, California. Case was referred to the Department of Psychology, Los Angeles Board of Education, in September, 1928, as "a behavior problem involving sensitive twins who, due to a combination of bashfulness and stubbornness, will not mingle with those outside of their own family, except when forced to do so." They were born in the eighth month of gestation; delivery was instrumental; were obviously immature, lacking finger and toe nails, etc.; there was considerable nutrition difficulty during the first year and delayed dentition; "they cried almost constantly until they were 7 months old"; were troubled with both diurnal and nocturnal enuresis until they were in their late teens and often had to be sent home from school on account of it. At school, especially in the early years, "they were together every minute, but did not mix with the other children." They were sensitive about their identical appearance and their foreign appearance: "We are alike and people stare at us"; and would not go out on an errand until after dark. Their mother said, "Never in their lives have they been sociable or even courteous to any one who came to the house. When relatives or strangers came they would run to their bedroom and stay until after the company left." "They would never tell when they are hurt or in trouble." Often they would argue, quarrel, and fight with each other, but would not tell other members of the family what the dispute was about. No history of lying, stealing, or truancy. "They have never spent a cent to buy anything for themselves; they do not seem to know what money is for." At school they were passed from grade to grade on their written tests, in which they did fairly well, as "they never would make oral recitations." They have shown no affection toward any one. Their only interest has been in reading, especially detective stories; "they want books from the library, but will not go after them." William is distinctly the more "schizoid" of the two. Alfred talks a little occasionally, but at least two teachers have not heard William utter a word in the course of a whole year. One teacher reported that the only time she had heard William talk was when she kept him for something and he heard the bus coming; he said, "Bus is coming, I will be late," and bolted for the door. Another teacher reported that when he refused to recite one morning she told him that he could just stay the next period and stand until he decided to talk. He stood the entire period and would not say a word. Later she learned that he had a class that period, but had made no effort to let her know that. William, however, is the more intelligent of the two. Purely on the basis of written tests in 1928 their I. Q.'s were estimated at 84 for Alfred and 109 for William. Educational achievement tests at the same time revealed, for Alfred, a grade placement in the eighth grade, for William in the eleventh.

Group 6. Child behavior difficulties, predelinquent types; subnormal intelligence; both affected, similarly. 4 cases: Nos. 48-51.

Case 48. I. twins, Alfred and Herbert. Born in Louisville, Kentucky, February 2, 1920. Our observation in July, 1931, through the courtesy of the Department of Psychology, Columbia University, New York. The father is described as "irresponsible, never had a steady job, plays pool mostly"; a paternal uncle is in a mental hospital on account of dementia praecox. The mother developed severe eclampsia three weeks before labor was due, the twins were delivered by Caesarian section, mother dying shortly after the operation. Both twins were somewhat hydrocephalic at birth, weighed $4\frac{1}{2}$ pounds each. They lived with their paternal grandmother until the age of 8 years, since then with their father and step-mother: "allowed to run wild, attended school only one or two days a month." Although they were physically almost indistinguishable in appearance, a closer acquaintanceship with them brought out marked differences in some respects: Alfred is right-handed, is a bedwetter, passive, dominated by his twin, afraid to sleep alone, less intelligent. Herbert is left-handed; never wets the bed; aggressive, overactive, boastful, abuses his twin, is more intelligent. Stanford-Binet tests in April, 1931, revealed, for Alfred, I. Q. 86, for Herbert, 106. Both present behavior problems on account of truancy, lying, petty stealing, staying out nights, begging "loans" from people to go to movies.

Case 49. B. twins, Jack and Mack. Born in New Mexico, June 17, 1917. Observed by us in December, 1931, in one of the Los Angeles, California, city schools. Mental tests in 1930 revealed, for Jack, I. Q. 88, for Mack, 84. Both present a behavior difficulty, though "Mack is much the worse." They are "impudent, very difficult to manage, always in mischief, always together; back each other up in impudence toward teachers." They are unreliable, do not keep engagements, have been suspected of petty thefts at school, "show off on all occasions"; very poor in studies. On the playground "they work together to spoil the games for the other children."

Case 50. Z. twins, Peter and Alexander. Born in New York, September 19, 1915. Observed by us in July, 1931, through the courtesy of the Institute for Child Guidance, New York, and the Bureau of Attendance, New York city schools. Peter has had great difficulty with reading and writing and is retarded at school by nearly 3 years. Mental test in 1928 revealed I. Q. 75. He has presented also persistent behavior difficulty: frequent truancy, temper tantrums in class, described by principal as "liar, proud of his bad record"; expelled from his school as incorrigible and has since been in a special school for problem boys and on probation in charge of attendance officer. He was also a sex delinquent on a grand scale. He was one

of a group of boys who had a *rendez-vous* in Central Park where they would bring a girl and all have sexual relations with her. In this way, he claimed, he had had relations with more than 30 girls. In Alexander's case mental deficiency is not a factor. A mental test in 1927 revealed I. Q. 95. At the time of our observation of the case he was in the 7A grade. He, too, however, presented behavior problems: a frequent truant, on probation in charge of attendance officer; many sex delinquencies, both with boys and girls, some of them in company with Peter. Also, following their mother's death, he had a transient psychotic episode: when the undertaker was about to remove the coffin containing her remains, Alexander objected to it, created a scene, struggled with the undertaker, threw a bottle at his head, is described as having been "a little off" since then.

Case 51. B. twins, Lawrence and Lester. Born in Los Angeles, California, December 17, 1915. Our observation in March, 1932, in the Jacob A. Riis High School, Los Angeles. Both are of dull-normal intelligence; Terman tests in 1931 revealed, for Lawrence, I. Q. 85, for Lester, 84. Truancy, rudeness, and gambling are the items listed against these boys. "They stand together against the rest of the world; are defiant of authority; no appeal seems to interest them." They spend most of their time in pool halls. At school they gamble with the other boys and "clean them out."

Group 7. Juvenile delinquency; subnormal intelligence; both affected, similarly. 13 cases: Nos. 52-64.

Case 52. P. twins, Manuel and Tony. Born in Berkeley, California, December 13, 1921. These boys have been extremely troublesome since they were 6 years old or before: throwing rocks through windows of passing trains; cutting tires on parked automobiles; breaking windows and entering the school building in the evening; being reported to the police as missing children; stealing a watch and other articles and hiding them by burying in the garden; stealing marbles from show case in store; stealing articles from unlocked automobiles parked in the street; getting other boys involved in their escapades, etc. They said, "The police can't do nothing to you anyway." At the time of our observation of the case, which was in August, 1932, they were wards of the Juvenile Court and under the supervision of the Berkeley Police Department. Mental tests in 1929 revealed, for Manuel, I. Q. 75, for Tony, 80. Tony seemed to be the leader.

Case 53. W. twins, Calvin and Alvin. Negroes. Born in Ohio, August 14, 1919. The behavior problem in both cases was petty theft. On August 16, 1929, they were committed to the state institution for the feeble-minded at Columbus, Ohio. On November 15, 1929, they were transferred to the state institution for the feeble-minded at Orient. At the time of our investigation of the case, which was in August, 1932, they were still inmates there. Mental tests in 1929 revealed, for Calvin, I. Q. 76, for Alvin, 74.

Case 54. W. twins, Fred and Edward. Negroes. Born in Montclair, New Jersey, January 22, 1916. There are eight other chil-

dren in the family ranging in age from 8 to 27 years. Home influences were good, and their delinquencies were attributed to bad associations with some Italian boys in the neighborhood. They were somewhat retarded in school, having reached the fifth grade at 12 years; played hookey occasionally. They were always together and were in trouble together. Their first arrest was on November 4, 1927, for breaking and entering, but the complaint against them was dismissed at that time. On December 21, 1927, they were arrested again, charged with six counts of larceny, and this time they were committed to the State Home for Boys at Jamesburg, New Jersey. There they remained until August 23, 1929, when they were paroled to the custody of their mother. At the time of our investigation of the case, which was in June, 1931, their behavior on parole had been excellent in every respect. Mental tests in 1928 revealed, for Fred, I. Q. 79, for Edward 83.

Case 55. H. twins, Darl Martin and Dale Merton. Born in Pennsylvania, June 29, 1916. Parents were divorced in 1923 and the twins were placed in the Fairmont Children's Home at Alliance, Ohio, where they remained until October, 1924. Since then Dale has lived with his father and Darl with his mother. They went to the same school, however, and played hookey a great deal. They are practically indistinguishable and have used this fact to deceive teachers and police and probation officers. While at the children's home in Alliance, Darl stole a pocketbook containing \$1.35. Dale seems to be the more markedly delinquent; he was first in court at 11 years for stealing \$20; since then he has been in court 13 times, usually for stealing; described as a nuisance to the police, teachers, etc.; expelled from school twice; burglarized a gas station, robbed a drug store, turned in a false fire alarm, "not satisfied unless causing trouble." In April, 1927, the twins, together with some other boys, stole a pocketbook containing \$40. In May, 1927, Darl stole \$20 from a filling station. Later in the same month the twins ran away together, were located in Barberton, Ohio, brought back, and on June 22, 1927, were committed to the Boys' Industrial School at Lancaster, Ohio. On March 17, 1928, Darl was paroled, but had to be returned on April 5, 1929, this time remaining until April, 1930. Dale was paroled on March 17, 1929, but had to be returned on March 12, 1932. At the time of our observation of the case, which was in July, 1932, he was still an inmate there. Mental tests made, respectively, in 1927 and 1932, revealed, for Darl, I. Q. 75, for Dale, 71.

Case 56. G. twins, John and George. Born in Rockwood, Ontario, Canada, April 21, 1916. Parents were cousins, father intemperate. Birth was by instruments. Twins were always together; associated only with each other; both have a record of persistent truancy from school. They had been before the courts three times for stealing and finally, on August 29, 1929, were committed to the Victoria Industrial School at Mimico, Ontario. From there, on December 2, 1931, they were transferred to the Ontario Hospital (for the feeble-minded) at Orillia. Their behavior at Mimico was not satisfactory, but since admission to Orillia they have been reported as obedient and not diffi-

cult to manage. Mental tests in 1930 and 1931, respectively, revealed, for John, I. Q. 53, for George, 47.

Case 57. S. twins, Raymond James and Rodney. Born in Akron, Ohio, February 22, 1916. These twins belong to a family noted for delinquency and criminality. Two older brothers are in the Boys' Industrial School at Lancaster, Ohio, and another is in the Mansfield Reformatory. Raymond was first brought into court at the age of 11 years for stealing money. He has been in court on nine occasions since for stealing money and bicycles. He has six bicycle thefts on his record. The twins usually work together and use their identical appearance for establishing alibis for each other. Raymond was committed to the Boys' Industrial School December 14, 1929; paroled January 20, 1931; resumed his thefts and was returned to the institution October 15, 1931. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there. A mental test in 1931 revealed I. Q. 77. Rodney was in court for stealing four times in 1929 and 1930, the last time for stealing an automobile. Like other members of his family, he is proud of his record as a thief. Says he has stolen several bicycles and not been caught. Defies them to catch him. Seems to hate everybody except his twin. He was committed to the Boys' Industrial School November 8, 1930, paroled July 3, 1931, returned together with Raymond October 15, 1931. Mental test of Rodney in 1930 revealed I. Q. 73.

Case 58. K. twins, Andrew and Daniel. Born in Harrisburg, Pennsylvania, December 12, 1914. Our observation in July, 1932, through the courtesy of the Pennsylvania Industrial Reformatory at Huntingdon. Two older brothers of these twins are serving 5-year prison sentences. There is no record of a mental test for either twin, but they have done poorly at school, especially Andrew, who is in the sixth grade at 18 years, while Daniel is in the low eighth. Both are judged to be of subnormal intelligence. Both have presented behavior difficulties since the age of 8 years or before, always together, playing hookey "lots of times," stealing peanuts, etc. At 11 years they were arrested together for breaking into box cars, and were released on probation. Their delinquencies continued, however, and from 1927 to 1929 they were in the Pennsylvania State House of Refuge for Boys at Glen Mills. Soon after their discharge they were in trouble again and, on July 14, 1931, were committed to the Pennsylvania Industrial Reformatory. At the time of our investigation of the case they were still inmates there.

Case 59. B. twins, Henry Clay and Milton Ray. Born in California, April 19, 1915. Father intemperate; mother developed a psychosis during pregnancy with her last child in 1918, was in Patton State Hospital, California, for nine months, discharged as recovered; parents were later divorced and mother remarried. During the pregnancy with the twins mother is said to have weighed only 80 pounds. Birth of the twins was difficult but not instrumental, both by breech presentation. Henry weighed 5 pounds, Milton, 4 pounds. Henry is right-handed, Milton left-handed. The twins did poorly at school, were in special classes and development rooms, showed increasing

"emotional instability," and finally became so troublesome that they were expelled. They were also troublesome and difficult to manage at home, and were first brought into Juvenile Court by their father in November, 1927. In November, 1932, they were again in court, this time on a charge of grand theft (Buick car). They were placed on probation, but in February, 1933, were brought up again on a charge of petty theft (stealing \$60 worth of tools from an automobile). They were committed to Pacific Colony (state institution for the feeble-minded) at Spadra, California, on April 5, 1933. At the time of our observation of the case, which was in June, 1933, they were still inmates there. Mental tests in 1929 revealed, for Henry, I. Q. 65, for Milton, 59.

Case 60. C. twins, Joseph and James. Born in San Francisco, March 22, 1912. These boys were first brought before Juvenile Court on November 2, 1927, together, for theft and for turning in false fire alarms. Since then they have been before the court repeatedly for stealing tires and a woman's coat, also for speeding on a motorcycle and violating probation. They were finally committed to the Preston School of Industry at Ione, California, November 22, 1929, and paroled January 19, 1931. At the time of our observation of the case, which was in March, 1931, they were at home and getting along very well. Mental tests in 1929 revealed, for Joseph, I. Q. 67, for James, 81.

Case 61. R. twins, Vincent and Charles Graciano. Born in Detroit, Michigan, September 8, 1911. These boys were first brought before Juvenile Court in January, 1924, when only 12 years old, on a charge of grand larceny. Since then they have been in various delinquencies both separately and together: petty thefts, running away from home, escaping from institutions, breaking twenty windows, violating parole, etc. They have been in Los Angeles Juvenile Hall; Pacific Lodge Boys' Home at Girard, California; Los Angeles County jail; Preston School of Industry at Ione, California. Charles has also been in the State School at Whittier, California, and in the Strickland Home for Boys in Los Angeles. At the time of our investigation of the case, which was in March, 1931, Charles had been on parole from the Preston School of Industry since September, 1930, and was keeping out of trouble. Vincent had run away from home in March, 1930, got a job on a freight steamer and, when last heard from, was in Baltimore, Ohio. Mental tests made in 1924 and 1926, respectively, revealed, for Vincent, I. Q. 70, for Charles, 81. Charles, the somewhat more intelligent twin, is said to have been the leader of the pair, yet Vincent, when alone, was also markedly delinquent.

Case 62. B. twins, Waldo and Walter. Born in Williston, North Dakota, April 8, 1910. The family has a poor reputation; they were made to move from one house in which they were living on account of being engaged in bootlegging; "wherever they go, they leave a string of unsettled debts behind"; an older brother of the twins has a record of delinquency and criminality, less marked than that of the twins. The twins left school at 15 years, having reached but the sixth grade. A mental test in Waldo's case, in 1928, revealed I. Q. 86. There is no record of a mental test of Walter. They are always together

and associate little with others. "Can't get jobs." They have always been stubborn and quick-tempered. They were persistent truants at school. They were first before the Juvenile Court in Salt Lake City for violating the anticigarette law. Later, in California, there was a great deal of trouble with them over petty thefts, especially stealing bicycles. Finally Waldo was arrested—this time alone—for stealing a Chevrolet car and, on June 8, 1928, was committed to Preston School of Industry at Ione, California. He remained there until July 12, 1929, when he was granted parole. At the time of our investigation of the case, which was in March, 1931, he was still on parole. There is no record of either twin having gotten into serious trouble since then.

Case 63. C. twins, Robert and Richard. Born in Brantford, Ontario, Canada, September 13, 1910. In this case the behavior difficulty seems to be attributable not only to constitutional factors, but also to bad influences in the home. The father is a heavy drinker and has "a bad moral reputation." The mother has two court records for stealing and shoplifting. There is no record of mental tests on the twins, but they are described as "below par mentally." Robert was in court twice prior to 1926 for stealing in company with his mother, and Richard has been known to the police as "incorrigible." They were committed on complaint of the Brantford Chief of Police on February 28, 1926, to the Victoria Industrial School at Mimico, Ontario. Robert remained there until May 27, 1929, when he was placed in his sister's home and given a job in a canning factory. Later he went to work for a roofer and helped his sister. At the time of our observation of the case, which was in August, 1932, he was getting along very well at home and at his work. Richard was released from the institution on March 10, 1930, when he was indentured to a farmer in Streetsville, Ontario. At the time of our observation of the case he was still there, well adjusted in every way, had "a first class reputation as a helper."

Case 64. J. twins, Isaac and Arthur. Negroes. Born in Orange, New Jersey, May 6, 1908. In this case the delinquency seems to be attributable, at least in part, to an unsatisfactory situation in the home. The mother deserted the family when the twins were still babies; the father died a few years later, and they were brought up by a paternal aunt. This aunt is reported to have scolded and whipped them frequently and otherwise ill-treated them. They did poorly at school, repeated grades, played hookey, reached the fifth grade by the time they were 14 years old. In Arthur's case there is a record of an arrest, prior to 1922, for breaking, entering, and larceny, but he denied his guilt. They were both committed to the State Home for Boys at Jamesburg, New Jersey, on June 2, 1922, for "incorrigibility." In 1923 the twins were paroled to the custody of their aunt, Arthur on July 10th and Isaac on October 25th. In January, 1925, on account of renewed friction with their aunt, they ran away from her home and found work and a home on a farm. The parole officer, upon investigation, allowed them to remain in this new placement. Since then they have made a satisfactory adjustment up to the time of our investigation of the case, which was in May, 1931. Mental tests in 1922 revealed, for Isaac, I. Q. 78, for Arthur, 80.

Group 8. Adult criminality; subnormal intelligence; both affected, similarly. 10 cases: Nos. 65-74.

Case 65. H. twins, Frank C. and Norman H. Born in Berwin, Maryland, September 5, 1911. Our investigation in April, 1931. Case history very meager. A mental test in Frank's case in 1930 revealed I. Q. 89. No record of a mental test of Norman. Frank was a soldier in the U. S. Army; on December 20, 1929, was sentenced to U. S. Disciplinary Barracks at Alcatraz Island, California, for a period of 2 years on a charge of converting automobile to own use. At the time of our investigation of the case Norman was serving a term of imprisonment in the Maryland House of Correction at Cheltenham for theft and assault on jailer.

Case 66. L. twins, Harold and Howard. Born in Washington, New Jersey, February 7, 1910. The father is alcoholic; an older brother has been in a boys' home in Trenton; a younger brother is a persistent truant, has a juvenile court record. The twins have always been together. They did poorly at school, left at the age of 14 years, having reached the fourth grade. Their delinquencies began shortly after leaving school and consisted at first in running away from home. For this they were arrested twice and placed on probation, but in November, 1925, were brought again before Juvenile Court: they had run away again, joined a circus, traveled with it as far as Hollywood, California; parents testified that they had been "disobedient and incorrigible." Accordingly, on December 5, 1925, they were committed to the New Jersey State Home for Boys at Jamesburg. From that time on they no longer had opportunity of acting jointly, but their delinquencies continued separately. Harold was paroled from Jamesburg on May 16, 1927; returned for violation of parole on July 12, 1927; escaped August 16, 1927; picked up within a few days and sent to the State Reformatory at Rahway; paroled from there in December, 1929. In February, 1930, he was arrested for robbery and recommitted to the Rahway Reformatory. Howard was paroled from Jamesburg on September 27, 1927; within a few days he was arrested for stealing an automobile and on April 20, 1928, was committed to the State Reformatory at Rahway; paroled from there in the spring of 1930, but was soon arrested again for breaking, entering, and larceny, and, on November 13, 1930, was sentenced to the State Prison at Trenton. From there he was transferred back to the Rahway Reformatory in January, 1931. At the time of our investigation of the case, which was in July, 1931, both twins were still in the Rahway Reformatory. Mental tests in 1926 revealed, for Harold, I. Q. 79, for Howard, 67.

Case 67. N. twins, Joseph and Hyman. Born in London, England, November 5, 1910. These boys began to be very troublesome at home at the age of 10 years or before, especially Joseph, who has always been "by far the worse of the two." They had been ungovernable, would steal money at home and run away and be gone for days or weeks at a time, associating with pickpockets. Joseph was committed to Children's Village, Dobbs Ferry, New York, on March 15, 1922, and remained there until September 8, 1922. Within a few weeks he stole \$10 from his father and ran away from home, and, on

October 16, 1922, he had to be placed in the Jewish Protectory at Hawthorne, New York, where he remained until June 18, 1924, when he was paroled. He then got along fairly well until April 13, 1927, when he stole \$65 from his father and disappeared. He then served 3 months in the Navy, later 8 months in the Army, each time getting out on a medical discharge. In 1928 he was charged with attempted unlawful entry and given a suspended sentence. In the early part of 1930 he, together with Hyman, stole a Jewish typewriter and on March 19, 1930, they were both committed to the New York City Reformatory at Hampton Farms. From there Joseph was paroled on September 30, 1930, but while on parole he cashed a check belonging to his employer and absconded with the money. He was therefore returned to Hampton Farms on December 19, 1930, and remained there until April 17, 1931. In the early part of 1932 he was arrested on a charge of attempted grand larceny (trying to pass a forged check); tried a plea of insanity, but without success, and on March 11, 1932, was committed to the State Institution for Male Defective Delinquents at Napanoch, New York. At the time of our observation of the case, which was in November, 1932, he was still an inmate there. A mental test in 1932 revealed I. Q. 74. Hyman, too, was sent to the Jewish Protectory, as an ungovernable child, and was there from February 8, 1922, to November 5, 1923, and again from July 23, 1924, to February 23, 1927. There is no record of a mental test in his case, but he, too, is undoubtedly of subnormal intelligence with a poor record in studies and with behavior difficulties, such as running away from home and from the protectory and, later, a very poor work record. As stated above, Hyman, together with Joseph, was committed to the New York City Reformatory at Hampton Farms, for stealing a typewriter, on March 19, 1930. From there he was paroled on November 25, 1930. At the time of our observation of the case (November, 1932), he was still at large, getting along fairly well, although changing jobs frequently.

Case 68. A. twins, Frank and Edward. Born November 2, 1906, place of birth unascertained. The record of delinquencies in Frank's case dates back to the age of 10 years, beginning with truancy, breaking and entering, and larceny. By the time he was 20 he had been brought before the courts on 12 charges. Edward first came to the attention of the courts at the age of 17 years on a charge of assault and battery and, by the time he was 20, he had been brought up on four charges. On February 26, 1926, they were both sentenced for 7 to 10 years to the Massachusetts State Prison for assault with intent to rape, being involved together in the same offense. Later, on account of their youth, they were transferred to the Massachusetts Reformatory. At the time of our investigation of the case, which was in September, 1930, they were still inmates there, but were to be released in the near future. Mental tests in 1926 revealed for Frank, I. Q. 79, for Edward, 80.

Case 69. N. twins, John Joseph, Jr., and Michael Joseph. Born in Rankin, Pennsylvania, August 29, 1907. Father was a heavy drinker, abused wife and children; he was a mill worker, family was often destitute and parents would send the twins out to steal bread and

milk from people's porches to have food for the family. Twins have one younger brother and four sisters, all free from delinquent tendencies. The twins were always together until they were sent to different penal institutions. They did poorly at school, reached sixth grade at the age of 16 years; played hookey together and sneaked into movie shows without paying. Michael's institutional record, on charges of larceny (mainly of automobiles), breaking and entering, and finally involuntary manslaughter (when in a drunken condition he stole an automobile and ran over and killed a 4-year-old child), consists of imprisonment on six different occasions, beginning in 1922, for terms varying from 30 days to 11 to 22 years, in the Thorn Hill School at Warrendale, Pennsylvania, Pennsylvania Industrial Reformatory at Huntingdon, Allegheny County Workhouse at Blanox, and Western State Penitentiary at Pittsburgh. At the time of our observation of the case, which was in July, 1932, he was still an inmate in the last-named institution. A mental test in 1931 revealed I. Q. 59. We do not have a full record of John's case, nor any results of a mental test. His school record was the same as Michael's and he, too, may be judged to be of subnormal intelligence. He served two terms of 1 year each for larceny, one in the Allegheny County Workhouse in 1928 and the other in the Pennsylvania Industrial Reformatory in 1929. The record is admittedly incomplete.

Case 70. K. twins, X and Y (the publication of their names or initials not authorized; they are Nos. 11760 and 11761, Connecticut State Prison at Withersfield). Born in Bridgeport, Connecticut, May 4, 1907. Although they are said to have reached the eighth grade at school, they have but borderline intelligence. Mental tests in 1929 revealed, for Y, I. Q. 78, for X, 77. Both are tattooed from head to foot. The official police records of their delinquencies in Bridgeport, Milford, and Derby, Connecticut, admittedly incomplete and probably to some extent confused on account of their identical appearance, begin with an arrest of both together for burglary on September 18, 1925. Since then there is a record, for X, of 13 arrests for misdemeanors and felonies, such as reckless driving, false election registration, drunkenness and breach of the peace, theft, breaking and entering, etc. There is a similar record for Y. Most of these arrests were for offenses committed jointly, but, for each twin, there were also five individual arrests. They have been given probation, fined, and given jail sentences of from 30 days to 6 months. On account of their youth they were for some years treated with leniency. Finally they were sentenced to the state prison on March 1, 1929. On November 10, 1930, they were granted parole, but on April 13, 1931, were returned for violation of same. At the time of our observation of the case, which was in August, 1932, they were still inmates there. Their behavior in prison has been unsatisfactory; they were being constantly reported for various infractions of regulations, such as having contraband in their possession, tattooing other prisoners, disorderly conduct, etc.

Case 71. P. twins, Elmer and Delmar. Born in Illinois in 1906. Parents illiterate and very poor. The twins did poorly at school and were unable to progress beyond the third grade. There is no record

of delinquency or criminality until September, 1925, when they were arrested together for stealing chickens and charged with grand larceny. They pleaded guilty and were committed to the Illinois State Reformatory, September 21, 1925. On November 9, 1926, they were paroled, and later returned to the reformatory a couple of times for small offenses, such as failure to send in reports to probation officers and throwing stones at an automobile and breaking the glass. At the time of our investigation of the case, which was in July, 1932, they were again out on parole and in good standing. Their behavior record while at the reformatory had also been very good. Mental tests in 1925 revealed, for Elmer, I. Q. 56, for Delmar, 55.

Case 72. L. twins, William and John (alias Peter). Born in Yonkers, New York, November 24, 1905. Both parents died when the twins were still infants and the twins were reared in St. Joseph's Home at Peekskill, New York. Later their aunt took them. They did very poorly at school both in studies and behavior. John was the first to become involved in serious delinquencies. His record begins with an arrest for burglary on July 21, 1920, when he was placed on probation. From that time until the early part of 1931 he was arrested 11 more times for breaking and entering, robbery, intoxication, vagrancy, etc. He served a term in the State Reformatory at Elmira, New York, from March 12, 1926, to February, 1928, when he was transferred to the State Institution for Male Defective Delinquents at Napanoch. From there he was paroled on May 4, 1929, but on August 9, 1931, was returned for holding up a boy in charge of a store, with a fake pistol, and taking \$40 out of the cash register. At the time of our observation of the case, which was in November, 1932, he was still an inmate there. A mental test in March, 1931, revealed I. Q. 50. William has a record of five arrests between 1922 and 1930 for unlawful entry, burglary, intoxication, and assault. He was given a suspended sentence; was later sent to the Westchester County, New York, Penitentiary in 1923 for 1 year; to the House of Refuge, New York, in 1925, for an indeterminate sentence; finally was committed to Sing Sing Prison at Ossining, New York, in 1930, from where he was transferred to Great Meadow Prison at Comstock, New York. At the time of our observation of the case, November, 1932, he was still an inmate there. A mental test in 1932 revealed I. Q. 72.

Case 73. D. twins, John M. and James M. Born in Minneapolis, Minnesota, September 3, 1899. Case history very meager. Both were in the Minnesota State Training School for Boys, at Red Wing, from 1912 to 1914, for larceny. On July 16, 1917, both were committed to the Minnesota State Reformatory, at St. Cloud, and were later given two trials on parole, but had to be returned both times for parole violations; they were finally discharged together on August 4, 1919; the offense was burglary. On February 25, 1926, they were sentenced together, on a charge of rape, two counts, to the Folsom Prison, California, for from 1 to 15 years. They were paroled together on June 8, 1932, and were on parole at the time of our investigation of the case, which was in December, 1932. At Folsom Prison they were "well behaved when together, but very unruly when separated; they were finally permitted to be together and during their last two years there

they were inseparable." There is no record of a mental test, but they are obviously of subnormal intelligence, certainly not above the "dull normal" level.

Case 74. L. twins, Leon and Lloyd. Born August 4, 1894. Family in fairly comfortable circumstances; twins have three brothers and four sisters, all free from delinquent or criminal tendencies. The twins did poorly at school, attained, respectively, fourth and third grades at the age of 15 years. Leon married at the age of 23 years, has two children. His first arrest was for abandonment of his wife and children; was given 2 years' probation; this was followed by divorce and he was ordered to pay alimony. His second arrest was for passing a forged check in 1928. He pleaded guilty and explained that he did it to get money to pay his alimony. He was then sentenced for a term of 1 to 2 years to Wisconsin State Prison on May 10, 1928; discharged on expiration of his sentence. At the prison he was well behaved, worked in carpenter shop. Mental test in 1928 revealed I. Q. 60. Lloyd remained single; drafted into the Army for service in the World War, honorably discharged in 1919. His first and only arrest was in 1928 for passing a forged check; pleaded not guilty, demanded a jury trial, was convicted and sentenced to Milwaukee County, Wisconsin, House of Correction on May 8, 1928, for 1 to 2 years. There he was well adjusted, worked in chair factory, was discharged on expiration of his sentence. Mental test in 1929 revealed I. Q. 59.

Group 9. Adult criminality complicating subacute schizophrenia with alcoholic etiology; both affected, similarly. 1 case: No. 75.

Case 75. B. twins, Pearl and Earl. Born in Hocking County, Ohio, in the summer of 1908. Our investigation in July, 1932, through the courtesy of Athens State Hospital, Ohio. One paternal aunt of the twins had a psychosis and was at one time a patient in the Athens State Hospital; both parents, three brothers, and two sisters are living and well and free from mental trouble and serious social maladjustment. The twins did rather poorly at school and had reached but the sixth grade when they left at the age of 16 years to go to work as laborers, chiefly in coal mines. Both began to drink alcoholic beverages, at first moderately, later more or less to excess. Although they are almost indistinguishable physically, there are some striking contrasts in the nature of their psychiatric affection. In Pearl's case the drinking and the psychotic manifestations are less marked than in Earl's, while the criminality is more marked. There is no record of a mental test for either twin. Pearl was the first to be committed to the Athens State Hospital, on April 23, 1928, on account of a paranoid trend; said that he had been picked on for years, first by the teachers at school, later by people in the town, that he was blamed for everything that happened in the community, and finally he threatened to kill his mother, brothers, and a police officer. Prior to his commitment he had been arrested seven or eight times for petty robberies. At the hospital he expressed a vague general persecutory trend, as described

above, was boastful, wanted it understood that he was "tough," described as "a notorious liar." In four months he made four attempts to escape out of the windows, by cutting a panel out of the door, by tearing up the floor, etc. On one occasion did escape in spite of being handcuffed and locked in a room, but was apprehended by the sheriff and returned to the hospital 5 weeks later. Because he was considered a dangerous patient to be at large and because of his persistent tendency to escape he was transferred on August 20, 1928, to the State Hospital for the Criminal Insane at Lima, Ohio. He has since been granted release from that hospital, date of discharge unascertained. Earl was admitted to the Athens State Hospital August 17, 1929. He had been arrested many times for intoxication. He had a psychosis characterized by an hallucinatory and persecutory delusional trend, said he heard voices, that a mob threatened to lynch him, was disturbed and at times had to be kept in seclusion. Also said he heard the voice of Kaiser Bill warning him not to tell about stealing things. He attacked other patients and attendants without provocation. He also developed a grandiose delusional trend, said he could bring dead people to life by his hypnotic powers and could read people's minds. "At the hospital he availed himself of every opportunity to steal and destroy." After a rather irregular fluctuating course he began to show consistent improvement and was finally discharged as "recovered" on December 31, 1930.

Group 10. Adult criminality complicating a manic-depressive psychosis; both affected, similarly. 1 case: No. 76.

Case 76. R. twins, John and William. Born in Arnprior, Ontario, Canada, March 5, 1909. Their mother developed involuntional melancholia and died recently in the Toronto Hospital. A younger brother of the twins is an inmate of the Ontario Hospital at Kingston with dementia praecox, hebephrenic type. The twins are short, stocky, "of pyknic type." When only a few months old they were separated, William being taken by an uncle who was a farmer living 200 miles away and in fairly comfortable circumstances, and John remaining with his parents. They have seen each other rarely, and only in recent years. John was the first to develop psychotic symptoms, although William was the first to be hospitalized. John had to leave school at the age of 13 years and go to work in a mill, as his father had died and he had to help support his mother and sisters. He has been somewhat unstable and never seems to have held any one position very long. Lately he has worried considerably over the family finances. His psychosis developed gradually in the early part of 1930, *i.e.*, at the age of 21 years. He developed fanciful ideas of a semireligious nature, said that Arnprior (the town in which he lived) had a connection with Noah's ark, gave up his job to spend his time hunting for the landing place of the ark, also for the exact site of the garden of Eden which, too, he said, was in that vicinity. He became very excited over this, and irritable and assaultive when contradicted. By this time (May, 1930), his twin brother had suddenly developed a mental breakdown and was committed. When John heard of this he became even

more upset. He went down the street and assaulted several people, who, he said, sneered at him about this, although they had not even spoken to him. He was arrested for assault and battery and held for a month in the Arnprior jail, from which he was committed to the Ontario Hospital at Kingston on July 31, 1930. Upon admission he was very unstable emotionally, quarrelsome, and assaultive; extremely untidy, smeared himself and the walls, showed distractibility with marked tendency toward sound associations. In a short time, however, he quieted down, developed full insight, laughed at his former religious ideas, and was anxious to go to work again. He was discharged as recovered on January 29, 1931. At the time of our investigation of the case, which was in August, 1932, he was in good health and well adjusted at home and at his work. William had always been very jolly, fond of company, "the life of the party." As has already been stated, unlike John, he was raised in comparative comfort. His psychosis developed suddenly and under quite different circumstances. In the spring of 1930 he applied for a position on the railroad, but did not get it. He became quarrelsome and assaultive; went out and placed obstructions on the railroad track of the line that would not hire him; then developed the idea that they were going to hang him for it. He was arrested on a technical charge of vagrancy and promptly committed to the Ontario Hospital at Kingston on May 10, 1930. Upon admission he was found to be very unstable and variable emotionally, showed distractibility, was quarrelsome and assaultive. He, too, cleared up in a short time and was discharged as recovered on January 29, 1931. At the time of our investigation of the case (August, 1932), he was at home, in good health, and getting along quite satisfactorily.

Group 11. Adult criminality associated with morphine addiction; both affected, similarly. 1 case: No. 77.

Case 77. McC. twins, Otto and Randolph. Born in Mississippi, February 27, 1888. Our investigation in August, 1930, through the courtesy of the East Mississippi State Hospital at Meridian, Mississippi. Otto began using morphine hypodermically at the age of 26 years, his daily dose increasing to as much as 15 grains. He took several treatments for it, but never remained off the drug for longer than 1½ years. His wife left him on account of his drug habit in 1927, which was 5 years after their marriage. His first admission to the state hospital was on October 3, 1918; discharged on October 24, 1918. Since then he has had ten readmissions and remained for periods varying from 4 days to 9 months, leaving the hospital by escape four times, by discharge six times. His last admission was on February 19, 1929, and he escaped on March 29, 1929. Since then he got into trouble on account of illicit possession of morphine and was committed to the state prison, where he was at the time of our investigation of the case. The hospital diagnosis each time was "drug addiction without psychosis." Randolph's history begins with periodic drinking at the age of 20 years. He would go on sprees of 2 to 3 weeks at intervals of several months. At the age of 36 years he stopped drinking, but began instead to take morphine by hypodermic injection, and this became a daily habit within a year. The daily dose increased up to 18 grains. His

first admission was to the state hospital on June 8, 1928. In April, 1931, in the course of a follow-up investigation, we learned that he had since had three readmissions, the last one on March 8, 1931, and that he was at that time still an inmate there. The diagnosis each time was "drug addiction without psychosis." Up to that time Randolph had not been in a penal institution.

Group 12. Juvenile delinquency or adult criminality; both affected, dissimilarly, one twin in each pair being of subnormal intelligence, but free from delinquency and criminality. 3 cases: Nos. 78-80.

Case 78. C. twins, Elmer and Louis. Born in Bridgeport, Pennsylvania, May 16, 1918. Our observation in September, 1932, through the courtesy of the Juvenile Probation Department, Los Angeles County, California. The mother, step-father, and five children have been on the county since 1927; home very poor and dirty. Mother first married at 14 years and gave birth to these twins; then had an illegitimate child by another man; later married her present husband. Elmer did quite well at school; a mental test in 1932 revealed I. Q. 90. Had not been in serious trouble until July, 1932, when he, in company with several other boys, entered a school building and stole from the cafeteria some flour, tomatoes, oranges, and about five dozen empty milk bottles which they sold. He had been in Juvenile Hall in 1929, but his case was dismissed. This time he was again in Juvenile Hall from July 18 to August 1, 1932, and was released to go home on probation. He was still on probation at the time of our investigation of the case. Louis is of dull-normal intelligence; a mental test in 1932 revealed I. Q. 86. However, he has never been in any difficulty; is hard working, sold papers on the streets, later bought a newspaper stand on York Boulevard.

Case 79. D. twins, Harold and Vincent. Born in Albany, New York, June 14, 1914. They were brought up in orphanages and children's homes and were described as mischievous, troublesome children; did very poorly at school. In 1930 Harold began to issue bad checks in small amounts and was finally committed to the reformatory at Elmira, New York, on October 27, 1930. From there he was transferred on March 25, 1931, to the Institution for Defective Delinquents at Napanoch, and was still there at the time of our observation of the case in November, 1932. A mental test in 1931 revealed I. Q. 53. Vincent was never adjudged a delinquent, but is emotionally unstable, quarrels constantly with his mother and insults her, runs away from institutions, once attempted suicide by taking poison. In the early part of 1931 he developed pulmonary tuberculosis and spent some months in two sanitariums. There is no record of any mental test in his case, but his intelligence has been estimated as on the level of high grade moronism.

Case 80. J. twins, Opal and Nolan. Born in Holdenville, Oklahoma, November 5, 1908. The twins went to school together, enlisted in the Army together, and were never separated for any considerable

length of time until Opal was sent to prison. In the Army Opal was rated as "inferior type, inadequate." On March 3, 1930, he was sentenced to U. S. Disciplinary Barracks at Alcatraz, California, for 5 years for "desertion, assault, and assault to commit rape." At the time of our investigation of the case, which was in March, 1931, he was still an inmate there. A mental test in 1931 revealed I. Q. 72. Nolan was "not a good soldier," but never got into serious trouble, has no criminal record, was discharged from the Army at the termination of his enlistment period. No record of any mental test, but he was judged to be, like Opal, of subnormal intelligence, probably on the borderline level.

Group 13. Child behavior difficulties, preneurotic or prepsychotic types, normal intelligence; only one in each pair affected. 5 cases: Nos. 81-85.

Case 81. L. twins, Richard and Robert. Indian boys. Born on Indian Reservation, San Diego County, California, in 1926. Our observation in November, 1931, through the courtesy of the San Diego County Health Department. No record of mental tests. Richard is reported to have a dozen or more temper tantrums a day. His mother states he has been "a yeller and a fighter" ever since he was born. It takes two or more adults to hold him to undress him at night and again to dress him in the morning. At meal times, if he does not get what he wants when he wants it there are more tantrums. In play he bullies Robert and any other children, is almost constantly fighting and already has several big scars as a result of this. Robert is a quiet, obedient child, submits indifferently to Richard's aggressiveness and domination, is rather stolid and lazy, but causes no difficulty.

Case 82. B. twins, D and M. Born in Los Angeles, California, January 28, 1922. Our investigation in November, 1932, through the courtesy of the Los Angeles Child Guidance Clinic. Both twins are left-handed; D has a marked hesitancy in speech; M also has one, but not so marked. D has a special spelling difficulty; M also has one, but less marked. D has, moreover, a special reading difficulty, whereas M is free from such handicap and is above his grade in achievement in literature. There is a marked difference in their intelligence; mental tests in 1932 revealed, for D, I. Q. 93, for M, 109. There is a corresponding difference in their progress at school; at the time of our investigation D was in the A5 grade; he had had to repeat one semester in the second grade; M was in the A6 grade, and had skipped the A5 grade. In D's case there was some evidence of a brain injury at birth; at 3 months he had an obscure febrile illness with involvement of the central nervous system. A neurologic examination in 1925 revealed unsteady station and gait and poor muscular coordination; a reexamination in 1932 revealed hypotonicity suggestive of a residual of a slight old cerebellar lesion. In September, 1932, he was referred to the Child Guidance Clinic as presenting a behavior difficulty, "unstable, irresponsible, scattered attention." M was examined at the same time, merely for comparison with his

twin brother; the neurologic examination was negative, and he presented no behavior difficulty.

Case 83. S. twins, Harold and Donald. Born in Arizona, November 1, 1915. Our observation in September, 1931, through the courtesy of the Vocational Counselor in one of the Phoenix, Arizona, high schools. Although they are of equal intelligence (mental tests in 1930 having revealed, for Harold, I. Q. 113, for Donald, 111), Harold's grades are consistently poorer: 3's and 4's, as compared with Donald's 2's and 3's. At school Harold is rather mischievous, but most of his behavior difficulty is in evidence at home: mother visits the school frequently and complains of the trouble she has with him at home on account of his laziness and disobedience, whereas "Donald is a model son."

Case 84. H. twins, J. C. and J. P. Born in Blair, Oklahoma, July 17, 1915. Our observation in December, 1931, through the courtesy of the Counselor at the Venice, California, High School. Although these twins are physically identical, there are slight differences between them in intelligence and in educational achievement and marked differences in attitude and behavior. Mental tests in 1927 revealed, for J. C., I. Q. 100, for J. P., 107. At the time of our investigation of the case J. C. was in the A6 grade, J. P. in B7. Neither is enthusiastic about scholastic work, rather yearning for their former "free life on a Texas ranch." Both had to repeat one grade, and J. C., in addition, one semester in another grade. J. C. is marked as a behavior problem both at school and at home, is described as extremely stubborn, of sullen disposition, resentful of any discipline at school; whereas J. P. presents no behavior difficulty at school, at home, or elsewhere.

Case 85. G. twins, Harry B. and William H. Born in Arizona, March 28, 1913. Our observation in September, 1931, through the courtesy of the Vocational Counselor in one of the Phoenix, Arizona, high schools. Although they are physically identical, there are marked differences between them in intelligence, in educational achievement, and in attitude and behavior. Mental tests in 1927 revealed, for Harry, I. Q. 93, for William, 105. At the time of our investigation Harry was still in the junior class in high school; whereas William had graduated in May, 1931, with 47th rank in a class of 562. He is described as more ambitious than Harry, well liked by his teachers, no record of demerits; whereas Harry had over 20 demerits in the past year alone.

Group 14. Adult criminality associated with mental deficiency; one affected. 1 case: No. 86.

Case 86. B. twins, Ralph and Mike. Born in Italy, September 29, 1905. There has been a marked difference between the twins in intelligence, temperament, and behavior since childhood, although they are identical physically. Ralph was a persistent truant from school, reached only the fourth grade, has never worked steadily, is described as "shiftless, a floater, hobo type." He deserted from the

Italian army, later came to this country. Arrested twice in Bridgeport, Connecticut, in 1928, for vagrancy, first time given probation, second time sentenced to the city jail for 9 months. On July 7, 1930, he was sentenced, for assault and battery with intent to rape, to Western State Penitentiary, Pittsburgh, Pennsylvania, for $2\frac{1}{2}$ to 5 years; escaped October 26, 1931, recaptured the same day, resented to serve additional $2\frac{1}{2}$ to 5 years in the penitentiary. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there. A mental test in 1930 revealed I. Q. 58. Mike seems normal in intelligence, although there is no record of a mental test. He got along well at school, has always worked steadily as a stone mason, served 2 years in the Italian army without trouble, later came to this country, has been free from criminal tendency.

Group 15. Adult criminality; normal intelligence; one affected. 8 cases: Nos. 87-94.

Case 87. G. twins, Huel and Euel. Born in Hamlin, Texas, February 17, 1911. Our investigation in November, 1932, through the courtesy of the Los Angeles, California, county jail. Both parents living; the twins have five brothers and one sister, all in good health and without criminal or delinquent tendency. The twins were brought up together, went to school together and finished the fourth grade, thereafter worked together in oil fields as mechanics. No record of any mental tests for either. Euel has never been in any difficulty, Huel alone being delinquent and criminal. On his first offense he was in jail a few days, having been arrested in a raid on suspicion of gambling, but case was dismissed. He was arrested a second time for a traffic violation. Finally, on June 30, 1932, he was arrested on a charge of rape, two counts, occurring within three days of each other. He was convicted on both counts and on September 26, 1932, was sent to San Quentin Prison, California, for 2 to 100 years. At the time of our investigation of the case he was an inmate there.

Case 88. C. twins, Wendell and Donald. Born in Englewood, Ohio, November 30, 1907. Our observation in October, 1932, through the courtesy of the Los Angeles County, California, Probation Department. One paternal uncle said to be "half-witted," but the family history is otherwise negative for nervous or mental disorders, delinquency or criminality. The father is a practicing physician and the family is highly respected in their community. Although the twins are physically identical and almost indistinguishable, and there was a single placenta at birth, they have been from infancy "exact opposites" in disposition. Donald was the first-born of the twins and was the heavier by 1 pound. He has always been quiet and studious, liked to stay at home and read, whereas Wendell wanted gay parties and excitement. Donald was a year ahead of Wendell at school. Mother stated that "Donald had the cares of the world on his shoulders, while Wendell never had a care in the world." They have always had different friends and, while there is no antagonism between them, they are not specially attached to each other. Donald has never presented any behavior difficulty, delinquency, or criminality. Wendell has associated with questionable characters, has been known to gamble,

has used wine tonic and marihuana. He has no prior record of arrests, however. On April 25, 1930, he was arrested on charges of grand theft and forgery. He had stolen an automobile, substituted false license plates, which he had also stolen, obtained gasoline by leaving a spare tire for security, forged his father's name to a check for \$10; later abandoned the car in another town. He entered a plea of guilty on all counts. He was first in the town lock-up for a couple of days, then in the county jail for 3 months, then in road camp 7 months, and after that was released on 5 years' probation. At the time of our observation of the case he was at home on probation and apparently getting along satisfactorily.

Case 89. P. twins, Albert and Charles. Born in San Francisco, California, December 25, 1900. Our investigation in November, 1932, through the courtesy of Los Angeles county jail, California. The criminality shown by one of the twins in this pair is very mild, consisting in a single episode of slight significance. Mother died in childbirth at the age of 35 years. Father died at the age of 45 years, of unknown cause, when the twins were 12 years old. There were 12 children born in this family, including these twins and another pair of twins. The twins had to quit school early in order to go to work and help support the family. They worked together on farms for 7 years. At the end of that time Charles remained on the farm and had made no change up to the time of our investigation; he has never been in any difficulty. Albert enlisted in the Army and served satisfactorily for 9 years (through three enlistments) and finally received an honorable discharge. Since then he has worked as automobile mechanic and at odd jobs, but by reason of the depression has often been unemployed. In one of the periods of unemployment, on October 13, 1932, he was arrested on a charge of vagrancy. He was still in the county jail at the time of our investigation less than a month later.

Case 90. M. twins, Glenn and Gene. Born in New Glasgow, Nova Scotia, Canada, September 28, 1897. Our investigation in November, 1932, through the courtesy of the Los Angeles county jail, California. In this case, the very persistent criminal tendency which developed in the one affected twin at about the age of 23 years seems to be definitely attributable to a cerebral injury. Although we have had no opportunity of observing both twins personally there would seem to be no doubt of their being monozygotic. They were reported by their mother as being identical physically, intellectually, and temperamentally; they were constantly confused by neighbors and teachers; there was only one placenta at birth; a photograph, too, taken of them together, which was submitted for our inspection, left no doubt on this point. They had graduated from high school with high honors. Both enlisted in the air service of the British Army at the time of the World War and both made an outstanding record at the front. Glenn received no fewer than seven citations, was rapidly promoted to the rank of captain. In June, 1918, while in command of his squadron of 16 planes, he engaged the enemy in 30 planes, part of one wing of his plane was shot off, he crashed in a nose dive from an altitude of 1500 feet; his head went through the instru-

ment board, a piece of strut pierced his jaw under the chin, emerging at right mastoid. He now has a large scar at the emergence point and marked deafness in the right ear. He was unconscious for 8 hours. At that time he also sustained other injuries, but nevertheless recovered and returned to flying 7 weeks later. In September, 1918, he was again shot down from an altitude of 1000 feet, with machine gun bullets disabling his motor and his right arm; used left arm for machine gun and held controls between knees; stripped landing gear and turned over on enemy territory. He had a multiple fracture of right leg, but managed to unhook belt and crawl from under plane, whereupon he set fire to it. He then became unconscious and remained so for 8 days, finding himself in a German hospital when he came to. About a month later he was exchanged through Switzerland. His criminal record, under several aliases, began in 1920, with a conviction on a charge of receiving stolen property in the State of Iowa, was sentenced to reformatory, with suspension of sentence subject to 3 years' probation. During the next 5 years he was arrested five times in the same state on charges of drunkenness, passing bad checks, and breaking and entering, but was dealt with leniently, presumably on account of his outstanding and heroic war record, serving jail sentences of 15 days to 6 months. In 1925, however, he was again convicted of receiving stolen property and sentenced to the Iowa State Reformatory at Anamosa for 5 years. Upon release from there in 1928 he came to California and was soon arrested again on a charge of forgery, four counts, convicted, and sentenced to San Quentin Prison for 1 to 14 years. He was paroled on June 1, 1931, but in 1932 was arrested twice and spent brief terms in the Los Angeles county jail on charges of battery and grand theft, respectively. Finally, in the latter part of 1932 he was again arrested on charges of forgery, six counts, and violation of parole. At the time of our observation of the case, which was in November, 1932, he was in the county jail awaiting trial. Gene was wounded at Arras, but not seriously, was demobilized in 1918, returned to his position as draughtsman and superintendent in a steel construction company in Nova Scotia, is married and has two children attending school, is reliable and eminently successful, has never been in jail in his life.

Case 91. M. twins, Jesus and Jose. Born in Morenci, Arizona, November 17, 1896. The family history is negative and the personal histories of the twins were uneventful and the same for both up to the age of 16 years. At that time Jesus was injured in a railroad accident, sustaining fractures of both legs and one arm and possibly a cerebral concussion. He spent 9 years in and out of hospitals. His criminal record, as far as known, consists in two jail sentences in Los Angeles County, California, in 1930 and 1931, 6 months each, for illegal possession of liquor; and a conviction for forgery in 1932, for which, too, he was sentenced to serve 6 months and pay a fine of \$500. At the time of our observation of the case, which was in November, 1932, he was still an inmate in the county jail. Jose is working as a laborer, steady, reliable, is married and has six children, has never been in any trouble whatever.

Case 92. B. twins, Steve and Nick. Born in Turkey, June 8, 1896. Our investigation in July, 1932, through the courtesy of the Eastern State Penitentiary at Philadelphia, Pennsylvania. Although the twins are physically identical and have often been mistaken for each other, they have been different temperamentally since boyhood. Steve stole fruit as a boy, "everybody steals fruit," had but two years of schooling, went to sea at 14 years, has always been irascible and "a fighter," also a heavy drinker. On one occasion, in a drunken brawl, he fought with a man who had a loaded gun; while struggling for the possession of the gun the man was accidentally shot and killed. Steve was tried for murder, but was acquitted. In 1931 he was again arrested on a charge of aggravated assault and battery; he had been once more in a fight and knifed a man. The man recovered from his stab wounds, so there was no murder charge this time. Steve was sentenced to the Eastern State Penitentiary on September 2, 1931, and, at the time of our investigation of the case, was still an inmate there. Nick had an equivalent of a high school education, presented no behavior problem in childhood or adolescence, has worked steadily as a carpenter, is married and has three children, supports his family well, is respected in his community, has never been in trouble with the police.

Case 93. C. twins, Morris and Henry. Born in Boston, Massachusetts, September 30, 1893. Our investigation in July, 1932, through the courtesy of the Western State Penitentiary at Pittsburgh, Pennsylvania. Father is said to have died of alcoholism at 70 years. There had been for many years a temperamental difference between the twins. Morris ran a pool room for a time, was much given to gambling, drinking, and sexual promiscuity; later worked as driver for two taxicab companies, but was fired from both on account of many accidents (one a fatal accident), insubordination, etc. In December, 1929, he, together with two other men, committed a series of store burglaries, and, on December 15, 1929, was sentenced to serve 19 to 38 years in the penitentiary. At the time of our investigation of the case he was an inmate there. A Stanford-Binet test in March, 1930, revealed I. Q. 92. Henry has never shown criminal tendencies, is married, owns a meat market, keeps aloof from Morris. No record of a mental test.

Case 94. O. twins, James and Eddie. Negroes. Born in British West Indies, May 16, 1892. Our investigation in July, 1932, through the courtesy of the Eastern State Penitentiary at Philadelphia, Pennsylvania. Although these twins have always been physically identical and almost indistinguishable, there has been a marked contrast between them since boyhood in temperament and behavior. James had but two years of schooling, played hookey frequently, went to sea at 18, and since then has habitually spent his time ashore in low seamen's resorts. Was very often in fights and took a great deal of pride in his pugilistic prowess. In one such fight in October, 1930, he maimed a man by cutting his face with a broken beer bottle, was arrested, charged with assault and battery, and sentenced to the penitentiary; was still an inmate there at the time of our investigation. Eddie had an eighth-grade education, went into the restaurant business at 24 years, and now owns a restaurant. Has always been a steady worker, is married and

has four children, has always provided for his family, has never been in trouble with the authorities.

§ 4. MONOZYGOTIC TWINS: FEMALE

Group 16. Child behavior difficulties, preneurotic and prepsychotic types; normal intelligence; both affected. 6 cases: Nos. 95-100.

Case 95. C. twins, Jo Ann and Joy. Born in National City, California, in 1925. Our observation in December, 1931, through the courtesy of the Public Health Nurse at National City, California. The difficulty with both twins has consisted in temper tantrums. This is their reaction to every obstacle and it is usually followed by a spell of violent sobbing. Sometimes the one starts the scene and immediately the other joins in. These occur so often during the day that they practically upset the kindergarten activities, and the nurse feels they should be removed from school for a time.

Case 96. V. twins, Jacquelyn and Myra. Born in Long Beach, California, July 5, 1924. Our observation in September, 1931, in their home in Long Beach. The father is unemployed and the county is supporting the family. Mother has violent outbursts of temper. Both twins have temper tantrums several times daily. It generally takes 2 to 3 hours every morning to get them dressed, mother and children fighting and yelling through the whole performance. They wet and soil themselves almost daily when playing. They are very unpopular in the neighborhood on account of their disobedience, destructive habits, and constant fighting with other children; neighbors were planning to ask the landlord to make them move. The twins also fight with each other and torment their younger brother, keeping him howling most of the time. They are very much afraid of all animals, including cats and dogs that other children play with. There is no record of a mental test for either twin; both are in the second grade at school.

Case 97. Y. twins, Josephine and Dorothy. Born in Oakland, California, June 10, 1923. Our observation in April, 1932, in one of the Oakland city schools. Father is described as cruel and domineering. Several of the other children in the family have an institutional history, and one sister is now in the Sonoma State Home at Eldridge, California, on account of mental deficiency. The twins are of normal intelligence; mental tests in September, 1931, revealed, for Josephine, I. Q. 102, for Dorothy, 98. But in spite of their normal intelligence, presumably by reason of a handicap of temperament and behavior, they have done very poorly at school: they spent $2\frac{1}{2}$ years in kindergarten, and have since been in the "Z" (slowest moving) section. They are described as "disturbers in the class room, emotionally unstable, i.e., given to inordinate laughing and crying, untrustworthy, untruthful, without initiative."

Case 98. C. twins, Grace and Rose. Born in Long Island City, New York, October 9, 1921. Our investigation in July, 1931, through the courtesy of the Institute for Child Guidance, New York City.

Father is said to have a disagreeable disposition, urged the mother to have an abortion performed when she became pregnant with the twins as it would cost too much to have a child; drinks to excess, is abusive toward the mother, beats her at times. Grace was the first born; Rose was born 3 hours later, was thought to be dead, left on the table, "but in a couple of hours sneezed and began to breathe." The twins cut their first tooth on the same day, talked the same day, both walked at 16 months, and were identical physically; there was never as much as 1 pound difference between them in weight. In early childhood, however, there developed a striking difference between them in intelligence and in temperament and behavior. Stanford-Binet tests in June, 1929, revealed, for Grace, I. Q. 118, for Rose, 107. They were referred to the Institute for Child Guidance in 1929 on account of "jealousy of each other, quarreling with each other, desire to dominate other children, show-off behavior." The special problem in Grace's case was aggressiveness toward Rose, demanding more attention from the mother; whereas Rose was sensitive and shy, dominated by Grace, more negativistic and disobedient toward the mother. Grace is, on the whole, much more of a problem: "will not eat properly or finish food, selfish, always keeps biggest share for herself, domineering, wants mother to dress and undress her, is antagonistic toward her father, vain, uses rouge and lipstick." Rose is more passive; gets along better with playmates, as she is not so bossy and disagreeable as Grace; she does not sleep well, complains of "seeing bad things"; tires more easily than Grace; at school has not done so well in reading as Grace.

Case 99. H. twins, Grace and Helen. Born in Arizona, December 17, 1917. Our observation in September, 1931, through the courtesy of the Phoenix High School, Arizona. These twins are of superior intelligence; mental tests in May, 1930, revealed, for Grace, I. Q. 126, for Helen, 124. They had done well in their studies in elementary school, but had slumped badly since entering high school. Described as "lacking in energy and ambition, just sitting idly in class, watching the others and dreaming, would not even play." In spite of high intelligence Grace "failed in every subject but English in the past year"; while Helen passed, but only with a 3 grade, *i.e.*, a barely passing grade.

Case 100. A. twins, Ruth and Belle. Born in Cincinnati, Ohio, August 8, 1913. Our investigation in June, 1931, through the courtesy of the United Jewish Social Agencies, Cincinnati. The father died of tuberculosis when the twins were 3 years old. The mother is described as emotionally unstable and psychoneurotic; she has been unable to support herself and the children and has been largely dependent on social agencies. The twins had 1 year in high school and then took a commercial course in a trade school. Mental tests in 1929 revealed, for Ruth, I. Q. 96, for Belle, 90. At the time of our observation neither had yet begun to menstruate, although they were nearly 18 years old. Ruth was the first to be brought to the attention of the Psychopathic Institute of the Jewish Hospital in Cincinnati; and this was in July, 1922. She was referred on account of peculiar behavior, screaming spells, night terrors, laziness, slovenliness, disobedience, etc.; described as selfish and emotionally unstable. In December, 1923, she was again referred to the Institute, as there had been no improvement

in the situation. Belle was first brought to the Institute in November, 1923, and has since been readmitted twice, in October, 1925, and in January, 1926. She was even more of a problem: "nervous, habit ties, lazy, egocentric, obstinate, of violent temper." Was sexually intimate with a man in the neighborhood.

Group 17. Child behavior difficulties, predelinquent types; normal intelligence; both affected. 10 cases: Nos. 101-110.

Case 101. H. twins, Una and Ula. Born in Oceanside, California, in 1922. Our observation in December, 1931, in a public school at Oceanside. They are a constant source of disturbance at school on account of abnormal sex curiosity and exhibitionism; "in all other respects they are nice, attractive children." They are constantly pulling up their clothes and exhibiting themselves and pulling off the clothing of other children. They have even attempted to lift the teacher's clothes. "All attempts to correct this have failed."

Case 102. S. twins, Phoebe and Phyllis. Born in National City, California, in 1917. Our observation in December, 1931, through the courtesy of the Public Health Nurse in National City. They are behavior problems at school: "Irrepressible, not amenable to discipline, untruthful, laugh uproariously in class, and call out coarse and vulgar remarks to and about others in the class; write obscene things on school walls and fences." They are inseparable and have no other girl friends, but go with a bunch of rough boys.

Case 103. A. twins, Ruth Imogene and Ruby Christine. Born in Elk City, Oklahoma, December 2, 1915. Our observation in October, 1931, in the Polytechnic High School, Long Beach, California. Generally irresponsible, especially in past year; never on time, with constant excuses of many varieties which are often later found to be false. They are sophomores, but "crashed" a senior prom on an illegally secured ticket. They gave fictitious names, claimed to be seniors; when identified they refused to divulge how they got their ticket; Ruth even tried to brazen it out, denied that Ruby was her sister (in spite of their identical appearance). The attendance officer got them out of the ballroom, but in the crowd near the door they slipped away and a few minutes later were again found in another part of the ballroom. This time they admitted their identity, but refused to leave; however, when a police officer was being brought toward them they got up quickly and left. In October, 1931, they were arrested together for shoplifting. Mental tests revealed, for Ruth, I. Q. 101, for Ruby, 105.

Case 104. L. twins, Dorothy and Meredith. Born in Los Angeles, California, February 14, 1916. Our observation in March, 1932, in Fremont High School, Los Angeles. The father of these twins had divorced their mother on grounds of sexual immorality. The twins are of average intelligence; mental tests in 1931 revealed, for Dorothy, I. Q. 95, for Meredith, 98. "The problem of these girls is of a sexual nature, coupled with ditching classes, lying, and loud, boisterous conduct. They have been in several escapades at school and are com-

monly recognized as leading an immoral life. Their expulsion from school is being considered."

Case 105. T. twins, Betty and Olive. Born in Redlands, California, December 11, 1915. Our observation in December, 1931, in the Redlands Junior High School. Mental tests in 1930 revealed, for Betty, I. Q. 92, for Olive, 96. However, "they do absolutely nothing in their school work and are failing in every subject." They "ditch" classes two or three times a week and are "boy crazy." When "ditching" they are accompanied by two or more boys—not the same ones each time. This has become so habitual that the mother telephones every morning to see if they are at school. The truant officer tells of their great versatility in eluding him. Several times they forged their mother's signature to excuses, but lately have given this up and make no excuses for their escapades, but seem to glory in "putting it over." They are quite inseparable.

Case 106. McF. twins, Eleanor Elaine and Patsy Ruth. Born in Escondido, California, September 30, 1915. Our observation in October, 1931, in the Polytechnic High School, Long Beach, California. "During the past week a raid was made upon the residence in the outskirts of Long Beach of a certain man who was entertaining his men friends by 'artistic tableaux' of nude girls, the two chief stars being these twins." It was revealed that these girls had been serving as "models" for about 3 years. In the medical examination it was revealed that Patsy Ruth had a florid case of syphilis and that Eleanor had also contracted syphilis 2 years previously. Their stepfather was apparently not interested in the matter, but the mother stated that she had not objected to the girls acting as models, as she desired for them an opportunity for "artistic development." The girls were suspended from school and turned over to juvenile court officials. At school they had been reported by teachers for "silly conduct in class and inattention." In addition, Patsy Ruth was reported by her art teacher for "kleptomaniac tendencies"; she would help herself to materials belonging to other students and would carry off "accidentally" school supplies. Eleanor was not known to have "kleptomaniac tendencies." No record of any mental test for either twin.

Case 107. McL. twins, Hally and Jean. Born in California, July 2, 1914. Our observation in April, 1932, in the Metropolitan High School, Los Angeles, California. Mental tests in 1929 revealed, for Hally, I. Q. 95, for Jean, 96. "They do nothing whatever in school work, dancing is their only interest, and they tend to disrupt classes by their flirtations with boys. They also ditch classes frequently in company with several boys, and are boisterous and vulgar in conduct. Have the reputation of being immoral."

Case 108. H. twins, Hester and Hazel. Born in Orange, California, September 13, 1914. Our observation in December, 1931, in the Orange High School. They are very poor in their school work, apparently from lack of interest, as they are not considered subnormal in intelligence; no record of a mental test for either twin. Their problem seems to be a sexual one: "They are boy crazy; no boy is safe when they are around. They have been involved in several school

scandals; should be excluded as undesirable influences." They are inseparable and their conduct is about the same, except that "Hazel seems to be somewhat the more aggressive in manner."

Case 109. P. twins, Joyce and Grace. Born in Redondo Beach, California, October 16, 1914. Our observation in December, 1931, in the Redondo Union High School. These girls are always together; both are very lively and out with boys constantly, loud and boisterous in conduct. In the fall of 1931 Joyce had to be excluded from school on account of an illegitimate pregnancy. Thus far Grace has not been brought to the office for any marked misdemeanor; but with the exception of this incident her conduct has been very similar to Joyce's.

Case 110. O. twins, Gertrude and Grace. Born in Phoenix, Arizona, May 30, 1913. Our observation in September, 1931, in the Phoenix High School. These girls are of somewhat above average intelligence; mental tests in 1929 revealed, for both, I. Q. 111. In spite of this they have made barely passing grades at best in their school work. "Their only interests seem to be in clothes, dancing, and boys." They are inseparable and constantly on the streets at night. Home background said to be poor; they seemingly never prepare their lessons. They seem to have no sense of responsibility, are often truant, violate school regulations in general and uniform regulations in particular; use make-up to a freakish extent; are always flirting with boys; exhibit a bored blasé attitude toward teachers, use bad language, and "will lie even when truth would stand them in better stead."

Group 18. Juvenile delinquency; normal intelligence; both affected. 5 cases: Nos. 111-115.

Case 111. R. twins, Wilma and Hazel. Born in Toronto, Ontario, Canada, September 16, 1922. Our observation in August, 1932, through the courtesy of the Mental Hygiene Bureau at Toronto. The school record of these girls describes them as "troublesome, quarrelsome, impertinent, truants; Wilma the more aggressive of the two." Mental tests in 1929 and 1930, respectively, revealed, for both, I. Q. 90. They were brought before the Juvenile Court in the fall of 1929 because of many petty thefts. The court record describes them as "superficial, flippant, and dirty." Upon recommendation of the Mental Hygiene Bureau it was decided to separate them and on November 11, 1929, Wilma was committed to the Shirley School for Delinquent Girls, while Hazel was to remain at home and to report weekly to the juvenile officer. This was still their status at the time of our investigation of the case.

Case 112. H. twins, Ruth and Eleanora. Born in Visalia, California, January 4, 1916. Our investigation in January, 1931, through the courtesy of El Retiro (school for delinquent girls) in Los Angeles County, California. The principal problem of these girls is sex delinquency which arose, at least in part, under the influence of their father. They are of equal intelligence. Mental tests in July, 1930, revealed, for Ruth, I. Q. 100, for Eleanora, 101. Temperamentally there seems to be a considerable difference, Ruth being distinctly more aggressive, the leader of the two, more excitable, whereas

Eleanora is quieter, more passive, "very much under Ruth's influence, does exactly as Ruth tells her." They were brought before Juvenile Court in July, 1930; their father confessed having had sexual relations with both girls many times; the girls also indulged in mutual masturbation and had had sexual relations with boys, especially their cousins. In August, 1930, while still in Juvenile Hall, Ruth led four other girls (not including Eleanora), attacked the matron, and organized an escape from the institution. The girls also lied, now admitting, now recanting incestuous relations with their father. On September 6, 1930, they were both committed to El Retiro and were still there at the time of our investigation of the case.

Case 113. S. twins, Lucille and Louise. Born in Neely's Landing, Missouri, October 6, 1913. Our investigation in June, 1932, through the courtesy of the State Industrial Home for Girls at Chillicothe, Missouri. The home background is bad; there was such poverty that both girls had to go to work as domestics before they had reached their teens; father drinks heavily and is cruel to the family; the mother finally divorced him, leaving the girls in his custody. The girls became sexually promiscuous around the age of 12 years. This was reported to their father and he whipped them severely. They continued, however, in their promiscuous relations and, upon the father's petition and by reason of their being much gossiped about in the town, they were committed to the State Industrial Home for Girls on October 2, 1927. At the institution they were noted as being "vicious, very sexy, and untrustworthy." They were finally both released on September 24, 1931, going out again to work as domestics.

Case 114. H. twins, Cora Stuart and Corinne. Born in Wells-ville, Missouri, June 30, 1913. Our investigation in June, 1932, through the courtesy of the State Industrial Home for Girls at Chillicothe, Missouri. Home background bad. The father died of tuberculosis when the twins were 5 years old. Mother then married a much younger man whose intemperance and abuse toward the girls "drove them out on the street"; mother eventually divorced the stepfather. The twins began "running around" with men when scarcely in their teens, staying out all night with boys and laborers belonging to a section gang on the railroad, although they had been told that some of the men were diseased. On July 10, 1927, Cora was committed to the State Industrial Home for Girls and, upon admission, was found to have a gonorrheal infection. On November 19, 1927, Corinne, too, was committed there, also suffering from gonorrhea. They had both been sent to the House of the Good Shepherd in Kansas City, Missouri, on May 16, 1927, and the delay in Corinne's commitment to the State Industrial Home was occasioned by an operation for a pelvic infection, when one ovary and both tubes had to be removed. In the State Home they were noted as "not vicious, but good for nothing, accomplishing almost nothing in their school work." They were both discharged on May 12, 1929. Subsequent history not ascertained, and there is no record of a mental test for either twin.

Case 115. S. twins, Beatrice and Bernice. Born in Illinois, March 7, 1914. Our investigation in July, 1932, through the courtesy of Institute for Juvenile Research, Chicago. Although there is no

record of a mental test for either twin, they are described as superior and "very lovely in other respects." Their difficulty is attributed to the fact that their mother had died in the early part of 1931 and they were left in charge of an older sister who was "a prostitute and implicated in a number of thefts." There was no record of behavior difficulty or delinquency in the twins prior to their mother's death. After their mother died two boys (brothers) began coming to the house and staying all night and having sexual relations with the twins. Both girls promptly became pregnant and were committed on November 13, 1931, to the State Training School for Girls at Geneva, Illinois. At the time of our investigation they were still inmates there, waiting to be delivered of their babies.

Group 19. Adult criminality; normal intelligence; both affected. 1 case: No. 116.

Case 116. S. twins, Mary and Jane (fictitious names). Born in Canada in 1913. Our investigation in August, 1932, through the courtesy of the Mercer Reformatory for Women, Toronto, Ontario, Canada. These girls are professional prostitutes, rather heavy drinkers, and have engaged in bootlegging. The case history is quite incomplete. It is known, however, that in 1930 they served a term of 2 months in a New Brunswick, Canada, jail on a technical charge of vagrancy. After that they went to the United States, were eventually arrested on a charge of "lewd and licentious behavior" and conducting a house of prostitution and, in the summer of 1932, were deported to Canada as "undesirable characters." Blood examinations revealed a positive Wassermann reaction in both. On August 20, 1932, they were sentenced for a term of 2 years to the Mercer Reformatory for Women, and at the time of our investigation of the case were still inmates there. There is no record of a mental test for either twin.

Group 20. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; both affected. 2 cases: Nos. 117-118.

Case 117. R. twins. Olga and Della Maria. Born in Colombia, South America, September 28, 1921. Our investigation in November, 1931, through the courtesy of the Nazareth Home of the San Diego, California, Catholic Welfare Association. These are illegitimate children; their reputed father was an American policeman in the Canal Zone; their mother, a Panamanian girl, died in giving birth to them. They are of somewhat unequal intelligence: mental tests in 1931 revealed, for Olga, I. Q. 89, for Della Maria, 95. In temperament they are markedly "schizoid," being extremely shy, timid, and very quiet if left to themselves, but given to excessive crying when interfered with in any way. They also present a problem in the form of an inveterate habit of masturbation which the Sisters at the home have not been able to correct in spite of various methods of restraint that have been tried. On account of this habit and their aloofness toward strangers the Sisters have been unable to send them out for adoption.

Case 118. H. twins, Margy and Margaret. Born in El Centro, California, July 24, 1916. Our investigation in June, 1931, through the courtesy of the Memorial Junior High School, San Diego, California. Margy is left-handed, Margaret right-handed: otherwise they are physically identical. Both are of dull normal intelligence and are failing at school, Margy the more markedly so. Mental tests in 1930 revealed, for Margy, I. Q. 82, for Margaret, 89. They are said to be obedient and easily managed at home, but at school they are not only backward in their studies, but also present a considerable behavior problem: are unruly, require much discipline, whine and complain, "lie defensively."

Group 21. Child behavior difficulties, predelinquent types; subnormal intelligence; both affected. 4 cases: Nos. 119-122.

Case 119. T. twins, Myrl and Vyrl. Born in Greeley, Colorado, March 10, 1918. Our observation in November, 1931, in the Compton, California, Junior High School. They are of dull normal intelligence; mental tests in 1929 revealed, for Myrl, I. Q. 87, for Vyrl, 84. They are physically rather overdeveloped for their age, extreme in their make-up, rather loud and vulgar in manner, giggle almost constantly. They are described by the Dean of Girls as "emotionally unstable, flighty, unreliable, fib a great deal, tardy, flirtatious, and impudent." Several times at school small articles, such as fancy handkerchiefs, vanity cases, etc., which had been taken from the teacher's desk, have been found in their possession. They have also been caught forging excuses for their own absences and for their friends.

Case 120. T. twins, Mary and Martha. Negroes. Born in Florida in November, 1918. Our observation in September, 1932, in "Development Center" in Los Angeles, California (special school for problem children), to which they had been transferred a year previously partly on account of poor progress in studies, partly because of behavior difficulties. Mental tests in 1931 revealed, for both, I. Q. 77. Described by teachers as "dirty, untidy, untruthful"; they have a record for fighting which makes them a continual cause of classroom disturbance and for which they had been expelled from their school. They also have a record of persistent truancy. They present, further, a problem of sex delinquency and are being almost regularly picked up by the police in the streets at night. They are never seen apart, both are generally in the same trouble at the same time.

Case 121. F. twins, Thelma and Wilma. Born in Sedalia, Missouri, July 25, 1917. Our observation in January, 1932, in Terrace Union School, Colton, California. They present, in intelligence, educational progress, and behavior, a marked contrast in comparison with other members of their family. A younger sister has an I. Q. of 125 and is a charming girl in every way. They are doing very poorly in their studies. Mental tests in 1931 revealed, for Thelma, I. Q. 71, for Wilma, 64. Both stammer badly, especially Wilma. Their teacher in the small country school considers them the greatest problem there. They are overdeveloped physically and "boy-crazy," and make them-

selves obnoxious in the neighborhood because of this. Whenever reprimanded in any way or foiled in their plans they cry loudly and long—usually have one or two such spells daily. They are quite inseparable.

Case 122. McG. twins, Mary and Felicita. Part Indian. Born in Los Angeles, California, January 25, 1915. Both have done poorly at school partly by reason of subnormal intelligence, partly on account of lack of interest in studies and persistent truancy; both have had to be transferred to the "Welfare Center" in Los Angeles (special school for problem children). Mental tests in 1929 revealed, for Mary, I. Q. 79, for Felicita, 77. Shortly prior to our observation of the case, which was in October, 1932, Mary, after one of her absences, was taken to the school clinic and found to be 3-months pregnant. The boy who was responsible for this was apprehended and forced to marry her, but he soon left her and she went to live with her uncle; baby due soon. Felicita also became involved with a boy and was married 6 months after her placement in the "Welfare Center."

Group 22. Juvenile delinquency; subnormal intelligence; both affected. 6 cases: Nos. 123-128.

Case 123. N. twins, Doris and Dorothy. Born in Toronto, Canada, May 9, 1919. Both were delicate babies, have speech defect, faint frequently, are heavy sleepers. They both have very frequent urination; there is a problem of both nocturnal and diurnal enuresis and other symptoms suggesting diabetes insipidus. They have caused much concern at school on account of their sexual activities and promiscuity. They were referred to the Juvenile Court in Toronto; examination revealed ruptured hymen in both and gonorrheal infection in Dorothy. Dorothy seemed the leader and was committed to the Shirley School for Delinquent Girls in Toronto on January 19, 1932, partly for the purpose of separating them. At the time of our investigation of the case, which was in August, 1932, she was still an inmate there, while Doris was on probation at home. Mental tests in 1932 revealed, for Dorothy, I. Q. 73, for Doris, 69.

Case 124. F. twins, Bessie and Betty. Born in Omaha, Nebraska, March 22, 1915. Our observation in January, 1931, through the courtesy of El Retiro (Los Angeles, California, county school for delinquent girls). The home background is bad; both parents are heavy drinkers and are often drunk, are continually quarreling, use bad language. The girls have "acquired the habits of their parents, *i.e.*, smoking, drinking, and using profane language." They have practically identical features, color of eyes, hair, skin, etc., but Betty is the taller by $1\frac{1}{2}$ inches and the heavier by 5 pounds. There is also considerable difference in intelligence; mental tests in 1929 revealed, for Bessie, I. Q. 94, for Betty, 82. Both are left-handed. For 2 years, 1926-1928, they were with their grandmother in Omaha, got into difficulty while there and were placed in the Riverview Detention Home in Omaha. After 7 weeks there arrangements were made for their release for the purpose of being returned to their parents in Los Angeles. They immediately became a problem in school: "A pester with their loud-

ness and swearing; they smoke and bring cigarettes to school, ride in machines with two Mexican boys; tough and hard-boiled because of inferiority complex; can no longer be kept in school, as they are bad examples to the other girls." They were finally brought before the Juvenile Court on February 18, 1929, and were paroled to their mother. There was no improvement, however, and on November 9, 1929, they were again in court. This time Bessie was committed to El Retiro, while Betty was placed in a foster home. Betty's record in the foster home was unsatisfactory and 10 days later she, too, was committed to El Retiro. At the time of our observation they were still inmates there.

Case 125. C. twins, Hazel Mae and Helen Louise. Born in Coshocton, Ohio, June 8, 1915. Home conditions were poor, parents separated, twins going back and forth between them. The twins left school at 16, having just reached the eighth grade. They were running around with a noisy and delinquent group of boys, but sexual relations were not proved. They were before Juvenile Court for breaking into their aunt's house and stealing various articles. Later they were brought in again for "incurability" and stealing a boat ride at night, although it was shown that Hazel alone was involved in the latter. On March 19, 1931, Helen was committed to the Girls' Industrial School at Delaware, Ohio. On July 1, 1931, Hazel, too, was committed there. At the time of our investigation of the case, which was in July, 1932, they were still inmates there. Reported by the institution authorities as "insufferably impudent and insolent; obstinate and defiant of all orders." Mental tests in 1931 revealed, for Hazel, I. Q. 69, for Helen, 68.

Case 126. P. twins, Katherine and Lillian. Born in Chicago, Illinois, February 24, 1913. Our investigation in January, 1931, through the courtesy of the Continuation High School, San Bernardino, California. Home conditions poor; father was arrested for petty theft, and mother later admitted to probation officer that she had lied to obtain his acquittal. Neighbors report both the mother and the girls as being sexually promiscuous. The girls have done poorly at school and are of subnormal intelligence. Mental tests in 1931 revealed, for Katherine, I. Q. 82, for Lillian, 83. Since the age of 14 years, or before, the girls have been in the habit of being out late at night with boys and men in the neighborhood. In 1928 they established sexual relations with a neighbor of theirs, about 40 years old, and later joined him, with their mother's consent, when he had moved to Los Angeles. They were first brought to the attention of the Juvenile Court in Los Angeles in October, 1928, were returned to San Bernardino and were referred to the local probation officer. On November 20, 1928, they were placed in a girls' training school in Alameda, California. After several months there they were released and have caused no further trouble since.

Case 127. S. twins, Elsie and Edna. Born in Watsonville, California, September 4, 1913. Our investigation in August, 1932, through the courtesy of the police department of Berkeley, California. Home background unsatisfactory. Mother is feeble-minded (I. Q. 56); father

deserted when the twins were 5 years old. Mother later remarried, second husband being also of subnormal intelligence (I. Q. 73). For nearly two years in 1919-1920 the twins were in the Fred Finch Orphanage at Oakland, California, but were refused further care there on account of being "chronic masturbators and a bad influence on the other children." After that, for about 6 years, they were in various foster homes, at the expense of the county, but frequent changes were necessary as the twins were "not amenable to ordinary home discipline" or would become "involved in sex play." The twins did very poorly in their studies at school, have always been in special classes; mental tests in 1924 revealed, for both, I. Q. 67. In 1925, when their mother remarried, the twins were allowed to go to their home, but difficulties soon developed on account of their running around with boys, staying away for two or more days at a time, etc. In January, 1931, the father of a boy in Berkeley reported to the police that his son had contracted gonorrhea from Elsie. The girls had by this time become notorious as "the shabby twins" and "the whores of West Berkeley." Elsie was then committed to the Sonoma State Home (for the feeble-minded) at Eldridge, California. There it was discovered that she had been infected not only with gonorrhea, but also with syphilis. Eventually she had a salpingectomy performed for sterilization and in the early part of 1932 was granted parole. Shortly after her release she was married to a man, aged 40 years. In June, 1931, Edna gave birth to an illegitimate child, but could not tell who was the father of it. In October, 1931, the child was accidentally scalded while Edna was bathing her and died a few weeks later. Following this episode Edna, too, was committed to Sonoma State Home on November 27, 1931. At the time of our investigation of the case she was still an inmate there.

Case 128. K. twins, Mary and Louise. Born in Chicago, February 11, 1913. An older sister is insane. The twins did poorly at school, having reached but the third grade when they left school at 15 years. All their delinquencies consisted in sexual promiscuity; they served as prostitutes for a club of 20 boys, had incestuous relations with their brother; Louise had a chronic gonorrheal infection. They were committed to the Dixon State Hospital (for epileptics and the feeble-minded), Louise on May 16, 1930, and Mary on May 11, 1931. At the time of our investigation of the case, which was in June, 1932, they were still inmates there, reported as being "constantly in trouble, fighting with other girls, using obscene language," etc. Mental tests in 1930 revealed, for Louise, I. Q. 42, for Mary, 43.

Group 23. Adult criminality; subnormal intelligence; both affected. 4 cases: Nos. 129-132.

Case 129. W. twins, Cornelia and Corinne. Part Indian, negro, and white (French). Born in Chicago, Illinois, November 16, 1908. Our investigation in October, 1932, through the courtesy of the Juvenile Division of the Probation Department of Los Angeles County, California. Both are somewhat subnormal in intelligence, Cornelia being the brighter and the more dominating. Mental tests revealed, for Cornelia in 1925, I. Q. 89; for Corinne in 1926, I. Q. 82. Their

delinquency has consisted mainly of sexual promiscuity which began in their early 'teens. They were before the Juvenile Court, singly and together, first in 1924 and repeatedly since then until they became of age in 1929, when they were transferred to the Adult Probation Division. Both have had to have treatment repeatedly for gonorrhea. Both were committed to El Retiro (county school for delinquent girls) on April 29, 1924, and were released on probation on September 24, 1924. Later both were sent to the Convent of the Good Shepherd, where Cornelia remained from September 28, 1925, to April 17, 1926, and Corinne from October 20, 1927, to July 25, 1928.

Case 130. R. twins, Lucy and Theresa. Born in Springfield, Massachusetts, January 30, 1914. Our investigation in August, 1932, through the courtesy of the Massachusetts Reformatory for Women at Framingham. Sex delinquencies began in these girls at the age of 12 years or before, together with persistent tendency to run away from home. Theresa was the first to leave home and Lucy joined her shortly afterward. "Both girls have been grossly immoral; they have lived in various places with persons of questionable reputation." Their official record of delinquencies is as follows: on July 23, 1927, Lucy was arrested for lewdness; she then had an illegitimate pregnancy; the baby was born and later was adopted by an older sister of the twins. In January, 1932, Lucy again gave birth, this time to a pair of twins, also illegitimate. On May 7, 1932, she was committed to the Massachusetts Reformatory for Women, and, at the time of our investigation of the case, was still an inmate there. A mental test, made shortly after her admission to the institution, revealed I. Q. 82. Theresa was arrested for lewdness twice in May, 1932, and the second time was sentenced to the Reformatory, but the sentence was suspended to May, 1934, pending good behavior. There is no record of a mental test, but she, too, is judged to be of subnormal intelligence of about the same degree as Lucy. The case history states that she had given birth to an illegitimate child in September, 1931.

Case 131. J. twins, Agnes Emmaline and Madeleine Jennie. Born in Austin, Minnesota, September 15, 1910. They were healthy attractive babies, exactly alike, and won a prize in a baby show. At the age of 3 years they were separated, Madeleine remaining with her mother in Pasadena, California, and Agnes going to live with her foster parents in Rock Springs, Wyoming. Madeleine was brought up in somewhat straitened circumstances, while Agnes had many advantages in the home of her well-to-do foster parents. The twins corresponded occasionally, but were together only once since their separation, namely, during a 4 weeks' visit at the age of 15 years. Their delinquent tendencies developed gradually shortly after puberty. These consisted, in both twins, of staying out nights, repeatedly running away from home, sexual relations with boys, lying, etc. After repeated appearances before the Juvenile Courts in their respective states and trials on probation they finally both were committed, Madeleine, on November 2, 1928, to the Ventura School for Girls, California, and Agnes, on June 18, 1929, to the Girls' Industrial School at Sheridan, Wyoming. At the time of our investigation of the case, which was in March, 1931, Agnes was still in the institution, while

Madeleine was at home with her mother, having been released on parole on May 11, 1930. Mental tests, on their admission to the respective institutions, revealed, for Madeleine, I. Q. 72, for Agnes, 89.

Case 132. W. twins, Mary and Gertrude May. Born in Worcester, Massachusetts, April 1, 1894. They are the illegitimate offspring of a woman who was probably feeble-minded, an inmate of the Worcester Home Farm until her death. They were given to the Sisters of Mercy who arranged for their separate adoption while they were still infants. As they matured, each got into trouble repeatedly, mainly on account of sexual promiscuity with illegitimate pregnancy, etc. Gertrude was in and out of the House of the Good Shepherd; finally they both were committed to the Massachusetts Reformatory for Women at Framingham, Gertrude on July 22, and Mary on August 22, 1914. They came under different names and it was not known either to them or to the institution staff that they were related. They were, however, identical in appearance and behavior to such an extent as to be quite indistinguishable. Later their origin was traced and it was found that they were twin sisters. Although there is no record of any mental test, they were recognized as feeble-minded. They also were observed occasionally in epileptic seizures. Gertrude was released from the Reformatory on July 3, 1916, but could not adjust herself outside. She was in the Worcester Home Farm for two brief periods in 1917, left there in November of that year, is said to have married in 1918, and has not been heard from since. Mary was released from the Reformatory on August 21, 1916, but she, too, could not adjust herself outside and, on November 2, 1916, was placed in the Worcester State Hospital; a year later she was transferred to the Foxborough State Hospital where she remained until April 17, 1918. There she was found to have mental deficiency without established epilepsy and without psychosis and was, accordingly, transferred to the Worcester Almshouse. At the time of our investigation of the case, which was in August, 1932, she was still an inmate there.

Group 24. Adult criminality; subnormal intelligence; both affected, dissimilarly. 1 case: No. 133.

Case 133. L. twins, Louisa and Rose. Born in Haverhill, Massachusetts, of Italian parentage, August 6, 1909. At the age of 14 years Louisa began to have epileptic seizures. Gradually thereafter she seemed to deteriorate mentally and there developed difficulties in behavior; she would go out at night with men and stay until 2 a.m.; the parents could no longer control her, as she would have outbursts of temper, spit in her mother's face, and threaten to turn on the gas and kill everyone in the house. On May 29, 1930, she was committed to the Massachusetts Reformatory for Women at Framingham. While there she had some epileptic seizures and was therefore transferred, on January 25, 1932, to the Monson State Hospital for Epileptics at Palmer, Massachusetts. At the time of our observation of the case, which was in August, 1932, she was still an inmate there. The diagnosis at this institution was epilepsy with mental deficiency. A mental test in 1932 revealed I. Q. 50. However, it would be impossible to

say at this time to what extent this was attributable to original mental deficiency and to what extent to epileptic deterioration. Rose never developed epilepsy. At first her trouble consisted in severe headaches, said to be of migrainous type, occurring just before the menstrual periods. Gradually she, too, became hard to manage, wanted to go out at night, and quarreled with her parents. On one occasion she cut off her hair when her parents refused to permit her to have it bobbed. Friction with her parents increased; she became stubborn, and finally refused to go to work. In the latter part of August, 1926, she suddenly developed psychotic symptoms. An adjoining house had caught fire during the night. She was terrified and ran to the window calling "Fire! Police!" From that time on psychotic symptoms persisted; she was greatly disturbed, and, on September 11, 1926, was committed to the Danvers State Hospital, Massachusetts. There she showed rapid deterioration both mentally and physically. A case note in the spring of 1928 stated: "Quiet, indifferent, has to be dressed, eats poorly, at times has to be tube-fed, does not answer when addressed, never speaks except to mutter to herself in Italian." She died in the hospital on May 8, 1928, of pulmonary tuberculosis. The hospital diagnosis of the mental condition was dementia praecox.

Group 25. Child behavior difficulty, preneurotic or prepsychotic type; subnormal intelligence; one affected. 1 case: No. 134.

Case 134. McC. twins, Rosa and Hazel. Born in Omaha, Nebraska, August 22, 1922. Observed by us in November, 1931, in the Washington Grammar School at Long Beach, California. The mother is described as highly excitable and nervous. In intelligence, educational progress, temperament, and behavior there is a striking contrast between the twins, although they are physically identical. Although there is no record of a mental test for either twin, Hazel seems to be of superior intelligence; she is doing excellent work, is in the "X-group" (fast-moving) in her class, quick to see what needs to be done and does it; is very considerate of others, gets on well with other pupils, prefers to be with older children; is very cooperative. Rosa seems of subnormal intelligence, is in the "Z-group" (slow-moving). Does not get along well with Hazel, seems to resent Hazel's brightness. Her main difficulty consists in violent temper tantrums which occur in class two or three times a week. "If she makes a mistake in her work or does not get her way she beats her head on the desk or the wall, tears her hair, or holds her breath till she grows rigid." When seen by us her head was all bloody from tearing a whole handful of hair out of her scalp because she had made a mistake in a little sum she had been doing at the blackboard. "After these outbursts she is generally limp for the rest of the day."

Group 26. Child behavior difficulty, predelinquent type; subnormal intelligence; one affected. 1 case: No. 135.

Case 135. B. twins, Edjuana and Juanita. Born in Los Angeles, California, February 29, 1916. Edjuana was the first-born; delivery was difficult and instruments were used, injuring the head and leaving a severe cut on one side of the face. Her birth weight was $3\frac{1}{2}$ pounds. She began to have convulsions at the age of 4 years; they occurred almost daily up to the age of 11 years. Since then they have been infrequent, but she has "violent spells" at the menstrual periods. She went to school at 7 years, but eventually had to be transferred to a "development school." She left school at 15 years, when she was still doing second grade work. Edjuana became troublesome in behavior; she would run away from home and be gone overnight; was restless, irritable, and at times threatening. She also developed psychotic symptoms: said people had it in for her, told of imaginary attacks, and was unstable emotionally, being at times depressed, at others hilarious, and at still others tempestuous and violent. Occasionally she would be seen standing in an awkward position for an hour at a time. She finally became so unmanageable that, on May 23, 1932, she was placed in Pacific Colony (state institution for the feeble-minded) at Spadra, California. At the time of our observation of the case, which was in September, 1932, she was still an inmate there. It was judged that she was not only feeble-minded to begin with, but also had suffered some mental deterioration in the course of her epilepsy and psychotic disease. A mental test in 1931 revealed I. Q. 28. Juanita was born without difficulty and without use of forceps. She weighed 4 pounds. There was no evidence of injury at birth. At the time of our observation of the case she was in the ninth grade at school, was in good health both mentally and physically, had never had a seizure, and presented no psychotic symptoms or behavior difficulty.

Group 27. Juvenile delinquency; normal intelligence; one affected. 1 case: No. 136.

Case 136. K. twins, Elsie and Sarah. Born in Cleveland, Ohio, May 15, 1900. They were brought up together, went to school together up to the age of 16 years, and after that Elsie went to work in a laundry while Sarah obtained a clerical position in an office. Elsie, like some other girls in the laundry, became promiscuous sexually, drifted into prostitution, was infected with both gonorrhea and syphilis, at the age of 17 years was committed for several months to a correctional institution. Upon release she resumed her promiscuous relations and in 1918 had an illegitimate pregnancy resulting in a miscarriage. In the latter part of 1931 she was placed in the City Hospital, Cleveland, on account of a "nervous breakdown"; the condition proved to be progressive, mental deterioration was noted, and on April 6, 1932, she was committed to the Cleveland State Hospital. At the time of our observation of the case, which was in July, 1932, she was still an inmate there. Examination at the hospital revealed

four-plus positive Wassermann and Kahn reactions in the blood together with physical and mental signs of general paresis. Sarah has never been in difficulty, maintains a home for herself and her husband, continues with her office work.

Group 28. Adult criminality; normal intelligence; one affected. 1 case: No. 137.

Case 137. B. twins, Gail and Geyne. Born in Charlevoix, Michigan, October 6, 1904. Our investigation in December, 1932, through the courtesy of the Los Angeles, California, county jail. The father was accidentally drowned when the twins were 2 years old. The birth of the twins had been prolonged and difficult, but there is no history of their being injured at birth; the mother, however, was badly torn and has been more or less an invalid since. At the age of 6 years the twins were separated, Gail remaining with her mother and grandmother, and Geyne going to live with an aunt about 160 miles away. Since then their destinies in life have been very different. Geyne has been comfortably provided for, studied piano for 12 years, married at 21 years, husband is chief chemist for a large steel firm; she is rather placid, a club woman, has always been in a protected environment, has never been in any difficulty. Gail was not very contented at home; at 16 eloped and was married. Marriage was not happy, after several years there was a separation and eventually a divorce. Gail went back to live with her mother and grandmother. In 1927 Gail and her mother were injured in an automobile accident; the mother has since been a wheel-chair patient; Gail suffered laceration of face and fracture of nose and cheek-bone with resulting deformity. In 1931 she remarried, husband is a railroad conductor, and not a very adequate provider. In the early part of 1932 she was convicted for shoplifting in Seattle, Washington, and served 30 days in jail. In the latter part of 1932 she was again convicted for shoplifting, this time in Los Angeles, California, and sentenced for 180 days in the county jail. At the time of our investigation of the case she was still an inmate there.

§ 5. SAME-SEX DIZYGOTIC TWINS: MALE

Group 29. Child behavior difficulties; preneurotic and prepsychotic types; normal intelligence; both affected. 5 cases: Nos. 138-142.

Case 138. S. twins, Eugene and Thomas. Born in Maywood, California, August 17, 1923. Our observation in October, 1931, in the Maywood Grammar School. Eugene is the less intelligent and presents more of a behavior problem. Mental tests in 1929 revealed, for Eugene, I. Q. 92, for Thomas, 108. Both boys seem to delight in hurting other children, Eugene being usually the instigator. Eugene had to be put back in a lower grade on account of poor progress in studies and lack of interest in them, as well as for the purpose of separating the twins. Thomas has done much better in studies and, when alone, is much better behaved. These twins are not allowed to be together either in the

classroom or on the grounds during recess, as trouble occurs whenever they are together.

Case 139. S. twins, Raymond and Robert. Born in Los Angeles, California, May 24, 1921. Our investigation in April, 1931, through the courtesy of the Los Angeles Child Guidance Clinic. Raymond was referred to the clinic as a behavior problem in August, 1928. Investigation revealed that he was physically weak, 7 per cent underweight, I. Q. 97. He was described as "destructive, bites nails, sucks thumb, stammers, quarrels, prevaricates, disobedient, easily angered, not affectionate, self absorbed, inattentive, picks nose," etc. He has done poorly at school. Robert, though not referred to as a behavior problem, has nevertheless, upon investigation, also presented a behavior difficulty, but of a milder sort, is stronger physically, does better in studies at school, has I. Q. of 102. Has been for years compared with Raymond to the latter's disadvantage, and has become aggressive: at school he was for a time continually fighting and biting other children, is harder to manage in the classroom than Raymond.

Case 140. B. twins, Joseph and Richard. Born in Chicago, Illinois, April 16, 1919. Our observation in November, 1931, in one of the Long Beach, California, city schools. These boys are of approximately equal intelligence; mental tests in 1928 revealed, for Joseph, I. Q. 94, for Richard, 90. There is, however, a marked contrast in their temperaments; they both present rather mild behavior problems, but of very different types. Joseph is rather quick-tempered, but popular with classmates, quite an athlete, "something of a scrapper"; has "ditched" classes a number of times in company with other boys, "but is honest about it." Frequently in trouble with teachers because of pranks. Richard is very seclusive, does not associate with other boys, masturbates excessively. He is sullen with his teachers, non-cooperative, indifferent to all group diversions and amusements, "seems to have no ambition." He is considerably overweight, and sensitive about it; nevertheless is an enormous eater. The twins do not get on at all together, avoid each other's company; Joseph displays a very contemptuous attitude toward Richard.

Case 141. B. twins, Gail and Glen. Born in Oxnard, California, March 17, 1917. Our observation in November, 1931, in the Jefferson Junior High School, Long Beach, California. Both do rather poorly in their studies, are described as lazy; Gail is half a grade behind and is the less intelligent; mental tests in 1928 revealed, for Gail, I. Q. 90, for Glen, 106. They seem to dislike each other greatly. Both present mild behavior problems, but of somewhat different kinds. Gail "seems to have no interest or ambition"; constantly quarreling with his twin brother and with classmates; "often starts a fight and when it goes against him runs to teacher and complains of others"; when made to do his work tries to copy and cheat; shirks every job, blames others for his misdeeds; when teachers detain him for conference he is either sulky or cries. Glen is described as somewhat unstable emotionally; flares up easily if crossed in any way; is either hilariously happy or very blue and feels abused; but "on the whole has a pleasanter disposition than Gail." He is "quite a scrapper," but fights more fairly,

takes his medicine better, is better liked by classmates, is much more honest than Gail.

Case 142. W. twins, Nowell and Melroy. Born in Huntington Beach, California, October 2, 1910. Observed by us in Huntington Beach High School in January, 1932. Both have "very ugly dispositions, though their reactions in any situation differ." They are constantly quarreling and fighting. Melroy "gets into a blind rage that leaves him white and limp and ill"; Nowell "curses and blusters, then blubbers." Although they are over 20 years old, "they act like spoiled children." "They are poor sports; can not take defeat or criticism." They stand together in fighting the other pupils, yet seem to dislike each other. "Constantly have a chip on their shoulder and grouch about everything." They are very poor in their school work, at the bottom of the whole class, "but will be graduated this February regardless." No record of any mental test for either twin.

Group 30. Juvenile delinquency; normal intelligence; both affected. 2 cases: Nos. 143-144.

Case 143. M. twins, Nathan and Morris. Born in New London, Connecticut, June 18, 1915. Our investigation in April, 1931, through the courtesy of the Jewish Committee for Personal Service, Los Angeles, California. These boys are of approximately equal intelligence; mental tests in 1930 and 1929, respectively, revealed, for Nathan, I. Q. 93, for Morris, 96. They are of very different temperaments and, although both have records of delinquency, Nathan's is much more serious and persistent. At the age of 8 years, or before, Nathan's delinquencies began with stealing small sums of money from the purses of his parents for candy, shows, etc. He has always been of restless, impatient temperament, described as "egotistical, saucy, flippant, smarty." Has been a persistent behavior problem everywhere: at home, in every school, in children's home, in various foster homes, etc. In addition to petty thefts his problem has been one of running away, associating with other delinquent boys, and "general incorrigibility." Various agencies have been interested in his case: Big Brothers, Child Guidance Clinic, private psychiatrists, but to no purpose. On December 16, 1929, he was finally committed to Whittier (California) State School (for delinquent boys); at the time of our investigation of the case he was still an inmate there. Morris also showed delinquent tendencies for a time, but of a milder sort; he would go along with his brother and loot vegetable wagons, grocery stores, etc., "just for the kick he got out of it"; he also smoked; but he never ran away, has always been more stable and courteous, and generally caused no trouble. In August, 1929, he was arrested, together with Nathan, for stealing a book in a department store. He was brought before the Juvenile Court and was released on probation. This experience "put the fear of God into him" and he has kept thoroughly out of trouble of any kind since then.

Case 144. T. twins, Lester and Chester. Born in Elkhart, Indiana, August 31, 1914. Our investigation in September, 1932, through the courtesy of the Probation Department of Los Angeles County, Cali-

fornia. The delinquency of these boys is limited to an episode during a period of a single week under the influence of their father. They had not been in trouble either before this episode or since. They are of somewhat unequal intelligence; mental tests in 1932 revealed, for Lester, I. Q. 94, for Chester, 107. They have been "great pals," always together. Their mother died during an influenza epidemic when they were 4 years old. For 3 years thereafter they lived with their father and grandmother. Then the father remarried, but 8 years later this marriage ended in divorce. The boys continued to visit their step-mother after she divorced their father and remarried; she speaks very highly of them; blames their father for the trouble they have gotten into. On December 16, 1931, both twins were arrested, together with their father and another man, on a charge of burglarizing some cabins in Topanga Canyon and houses elsewhere during the week of December 7 to 14, 1931. They were kept in the county jail for about 5 weeks, then transferred to Juvenile Hall, where they remained about a month. Both were then placed on probation, obtained positions—Lester with the Western Union Telegraph, Chester on a ranch—and have since been self supporting and well behaved.

Group 31. Adult criminality; normal intelligence; both affected. 3 cases: Nos. 145-147.

Case 145. O'B. twins, Arthur and Walter. Born in Albany, Oregon, January 15, 1909. Our investigation in June, 1931, through the courtesy of the Western State Hospital at Salem, Oregon. The mother of these twins was insane and died in a state hospital. Both twins are considered psychopathic personalities and both have been heavy drinkers for years. Arthur became involved in 1930 in an automobile theft in Klamath Falls, Oregon. He claimed he had done this under the influence of liquor and had no recollection of it. He was sentenced to serve 3 years in prison, but the sentence was suspended and he was placed on probation in the custody of a local priest. Soon thereafter, however, again while drunk, he broke into a service station, stole another automobile, and wrecked it while trying to escape from pursuing officers. Upon examination he was adjudged insane—"psychosis with psychopathic personality"—and on January 4, 1931, was committed to the Western Oregon State Hospital. Walter's police record consists of a number of arrests for drunkenness, etc., followed by short jail sentences. He is described as unreliable, going with "a bad crowd," leading an irregular life, living by odd jobs.

Case 146. C. twins, Otis and Otto. Born in Curtisville, Minnesota, August 16, 1904. The father died when the twins were 9 years old. The twins shifted around a good deal between their mother's home in Arizona and that of their grandfather in Colorado. Both twins presented behavior difficulty in childhood and adolescence; Otto, especially, "was not much for studying, in hot water with teachers most of the time"; however, he has never been in serious difficulty and has no record of delinquency or criminality. Otis enlisted in the Army at 14 years, and was "kicked out"; later reenlisted, served 26 months, became cadet pilot, was honorably discharged. Eventually married, there were two children, and he was separated from his wife. His sole

item of criminality consists of conviction of violation of Wright Act (liquor law) with sentence to serve 105 days in Los Angeles county jail (California) on October 17, 1932.

Case 147. W. twins, Judah and Reuben. Born in Hungary in 1895. Our observation in August, 1932, through the courtesy of the Dominion Penitentiary at Kingston, Ontario, Canada. The twins were the youngest of a family of seven children. The father died soon after their birth and the mother with the children then came to Canada. The eldest son, 15 years of age at that time, got a job and supported the family. He has since acquired considerable wealth and has always been a substantial citizen, as have the four sisters. The twins ran away from home at an early age, but separately. They did this several times, disappearing for a year or two at a time, but always separately. They have never been together in any of their enterprises and have not been attached to each other. The older brother has helped them both at various times and got them out of minor difficulties. Judah was convicted of manslaughter in 1920, spent 5 months in Montreal jail, and was pardoned. From January, 1923, to June, 1927, he was in the Dominion Penitentiary for housebreaking and theft; again from August, 1927, to March, 1929, for shopbreaking and theft; finally sentenced to that institution for the third time in November, 1929, for shopbreaking and receiving stolen goods, for a term of 7 years. At the time of our investigation of the case he was still an inmate there. Reuben has a similar criminal record and, in addition, a chronic schizophrenia. He was in the Toronto jail from July to August, 1918, for "procuring"; again in 1921 to 1922 for theft; and a third time from January to April, 1923, also for theft. Finally in April, 1929, he was sentenced for a term of 5 years to the Dominion Penitentiary for shopbreaking and receiving stolen goods. Although his crime was very similar to his brother's, it was committed in another place, a month earlier, and he was sentenced by another court. At the time of our investigation of the case he, too, was still an inmate at the penitentiary. He kept reiterating that his trouble had been caused by the Jews who wanted to do away with him because he had Gentile companions and had lived with a Gentile woman, though not married to her. He complained that they had poisoned his tobacco, that his food was tainted with slow poison, that he was being slowly electrocuted, etc. He had been examined by two psychiatrists from the Kingston Hospital who reported him as suffering from dementia praecox, paranoid form.

Group 32. Child behavior difficulties, preneurotic or prepsychotic types; subnormal intelligence; both affected. 5 cases: Nos. 148-152.

Case 148. B. twins, Charles and Robert. Born in Philadelphia, Pennsylvania, May 20, 1923. The twins are the youngest of ten children; all the others are reported to be normal. Charles was greatly retarded in learning to walk and talk; still lisps; has enuresis day and night. He was admitted, together with Robert, to the Children's Hospital and School, Randall's Island, New York, February 28, 1927. Both twins were later transferred to Letchworth Village, Thiells, New

York, Robert on May 12, Charles on May 26, 1931. At the time of our observation of the case, which was in July, 1931, they were still inmates there. Charles has been free from convulsions or behavior difficulty. A mental test in 1931 revealed I. Q. 62. Robert's mental deficiency is more pronounced. A mental test in 1927 revealed I. Q. 32. In addition, he has had epilepsy since the age of 4 months. Has concomitant strabismus. Soils and wets himself. Presents marked behavior difficulty: restless, overactive, destructive, screams, strikes other children, runs away from the ward, at times requires restraint.

Case 149. B. twins, Billy and Bobby. Born in Oakland, California, July 25, 1922. Our observation in April, 1932, in one of the Oakland, California, city schools. The twins weighed 3 and 3½ pounds, respectively, at birth, were very puny and had not begun to gain until they were 3 months old, at which time they were adopted by their present foster parents. Bobby is of somewhat subnormal intelligence; a mental test in 1929 revealed I. Q. 82. Billy was tested in 1931 and found to have an I. Q. of 101. Both were late in learning to talk, namely, not until they were 3 years old. Both are handicapped by a special reading difficulty, being practically "nonreaders," and are therefore in the "Z" (slow moving) section in their class. Both quarrel with each other and with neighbor children, but Billy much more than Bobby. Billy, in addition, developed at an early age a tendency toward temper tantrums both at home and at school. He lies on the floor and screams and kicks anyone who comes near him.

Case 150. Y. twins, Stanley and Sterling. Born in Colorado, December 25, 1915. Our observation in October, 1931, in one of the Long Beach, California, city schools. Only Sterling is of somewhat subnormal intelligence, I. Q. 81; Stanley's I. Q. is 93. Both, however, present behavior problems, but of dissimilar nature. Stanley's extreme effeminacy has made him the butt of the school for several years. He never would associate with boys; formerly played with girls, but latterly has given that up, stating that they are "too rough." He shuns all young people, but will hang around his mother, or teacher, or other woman. He likes helping with household tasks, but has grown so sensitive that he hides when anyone comes to the house. At school it is very difficult to make him go out on the playground or even to gymnasium class; he makes all sorts of excuses to avoid it; sits around and dreams. Sterling is characterized by the neighbors as "a stick of dynamite." Although somewhat undersized, he is a constant scrapper, always imagining insults, many of which concern his twin. He openly scorns Stanley, calls him a fool and a sissy, doesn't want anyone to know they are twins. He is very disobedient both at home and at school; is noted for his extensive vocabulary of profanity; seems to be the leader of a gang of younger boys who are frequently in trouble for stealing fruit from trees, smashing signs, and other like depredations. The parents are very unhappy over the behavior of the twins and blame each other for it.

Case 151. B. twins, Tom and Joe. Born in Fullerton, California, August 9, 1915. Our observation in November, 1931, in one of the Long Beach, California, city schools. Tom is of somewhat subnormal

intelligence; a mental test in 1930 revealed I. Q. 83. He is retarded in studies; at 16 just entering the eighth grade. He also presents a behavior problem: "an almost constant 'ditcher,' hangs around pool halls, is lazy and untruthful, uncleanly, often reported for foul body odors, has to be sent out to wash; slouches in his seat, pays no attention to lessons, seems to be day-dreaming with mouth open and a stupid stare on his face." Joe is more intelligent; a mental test in 1930 revealed I. Q. 95. Is also lacking in interest in his studies, somewhat retarded (in 8a grade at 16), has "ditched" classes occasionally; is more tidy about his person; is athletic and wants to be a prize fighter. The twins seem to hate each other cordially.

Case 152. M. twins, Fred and John. Born in Arizona, March 15, 1912. Our observation in September, 1931, in the Phoenix High School, Arizona. Both are of dull-normal intelligence; mental tests in February, 1930, revealed, for Fred, I. Q. 88, for John, 89. Both are retarded in studies, are in junior year in high school at 19 years, taking vocational courses mainly in machine shop. Both present behavior problems leading to frequent disciplinary conflicts; they are "big husky fellows who attempt to act smart"; occasional truants. Fred's chief interest is in athletics. John "attempts to run the shop"; is described by his teacher as "mouthy, irresponsible, of unkempt appearance."

Group 33. Child behavior difficulties, predelinquent types; subnormal intelligence; both affected. 5 cases: Nos. 153-157.

Case 153. H. twins, Floyd and Lloyd. Born in Dallas, Texas, November 30, 1921. Our observation in November, 1931, in one of the Long Beach, California, city schools. They are 2 years retarded at school. Mental tests in 1931 and 1930, respectively, revealed, for Floyd, I. Q. 78, for Lloyd, 76. The home background is very poor, father is said to be shiftless and quarrelsome, family on charity. Both boys present a behavior difficulty, but Lloyd seems to be the leader, Floyd the follower. Together they have been persistent truants and have been caught in several petty thefts. The family had come to Long Beach about 1½ years prior to our observation of the case. In all that time Lloyd has been in constant trouble with the authorities. He seems to be the leader of a gang of boys who have committed many thefts in the neighborhood and maliciously destroyed property, such as flower beds, trees, shrubs, window panes. Lloyd is defiant of attendance officers and they are considering turning him over to the Juvenile Court.

Case 154. C. twins, Tony and Mike. Born June 19, 1921. Our observation in December, 1932, in "Welfare Center," a special school for problem children in Los Angeles, California. Tony is said to have always been "defiant of authority, with no respect for property rights; never follows school or civic laws." Reported to police for misbehavior in neighborhood: stealing, destruction of property; also has stolen many small things at school; "uses foul language habitually, swears when reproved"; does not come in when bell rings; is often truant. "Parents take no responsibility; reputation of family is bad;

father is usually unemployed; brother Frank sent to a special school on account of petty thieving; sister in welfare school for problem cases. Description of Mike's case is given in about the same terms, except that "Tony's case seems more marked." Mental tests revealed, for Mike, I. Q. 86, for Tony, 92. Both have been frequently punished for attending to toilet needs on school grounds. They have been so troublesome at school that they have had to be transferred to special classes or to the "Welfare Center."

Case 155. J. twins, Richard Clayton and Robert Granville. Born in Bedford, Indiana, June 4, 1920. At the time of our investigation of the case, which was in December, 1932, they were both in the fifth grade of one of the Bloomington, Indiana, city schools, *i.e.*, about 2 years retarded. Mental tests in 1932 revealed, for Richard, I. Q. 75, for Robert, 89. They also both present a behavior difficulty, in which, however, Robert is distinctly the leader. The behavior difficulty is probably attributable, at least in part, to an unsatisfactory home situation. The mother deserted the family when the twins were still infants. The father remarried, but soon divorced the stepmother. The twins seem to have no supervision. They fight, swear, and steal small things at home and at school. In the classroom they are often impudent and difficult to manage. For a time they took to tormenting a neighboring farmer's hogs with sharpened sticks until one valuable hog died. As already stated, Robert is the leader in mischief, but when they are caught he always lays the blame on Richard.

Case 156. C. twins, Angus and Tillman. Born in 1915. Observed by us in March, 1932, in Fremont High School, Los Angeles, California. Mental tests, in 1930, revealed, for Angus, I. Q. 88, for Tillman, 97. These twins are reported to have come from "a poor, bad home; the father has been in jail for stealing a car; the boys are said to have been implicated in this theft, although no court action has been taken against them." They are rude and rough in school, and sullen when corrected. Angus seems to be the more aggressive of the two. "Last fall they were in trouble over destroying property in the neighborhood—breaking windows, etc."

Case 157. M. twins, Albert and Charles. Part Indian. Born in San Bernardino, California, in 1914. Observed by us in December, 1931, in one of the Anaheim, California, city schools. Mental tests, in 1931, revealed, for both, I. Q. 74. The problem is petty theft. When the children at the school miss things, they are very often found in the possession of the twins. Of the two, Albert is described as "the sly one," and Charles as "the bully," but they always work together, and are said to be equally at fault.

Group 34. Juvenile delinquency; subnormal intelligence; both affected. 10 cases: Nos. 158-167.

Case 158. F. twins, Clifford and Clarence. Born in Illinois, November 10, 1918. Clifford was committed to the St. Charles School for Boys, Illinois, on October 29, 1931. Clarence was committed to the same institution on November 17, 1931. At the time of our investiga-

tion of the case, which was in July, 1932, they were still inmates there. Both were reported as "incorrigible." The particular act which led to Clifford's commitment was stealing an automobile in October, 1931. Clarence had stolen "corn and a calf and other property" at various times during the year preceding his commitment; it was also stated in the complaint that "he wanders about the country and is out late at nights on no lawful business." Mental tests in 1931 revealed, for Clifford, I. Q. 78, for Clarence, 73.

Case 159. T. twins, Harley and Earle. Born in Springfield, Missouri, April 8, 1912. The twins are both delinquent, but are markedly contrasted in degree of delinquency and in intelligence. Harley was before the Juvenile Court in 1927, twice in 1928, and again in the early part of 1930. In February, 1930, he was committed to the Preston School of Industry at Ione, California, where he remained until March, 1931. His record there was very good and he earned an early parole. At the time of our investigation of the case, which was in March, 1931, he had just been paroled. At the time of his commitment he seemed to be proud of his record of delinquencies, boasted of having committed 16 burglaries and stolen 14 automobiles. He said he got a thrill out of stealing "bigger and bigger things" and did not care what happened to him; but he did not want to get his twin brother into trouble, so when he was going out "on a job" he made his brother stay at home. He hated school, got only as far as the seventh grade, then quit to go to work. Worked at odd jobs quite consistently, even while thieving. A mental test in 1931 revealed I. Q. 77. Earle did somewhat better at school, reached the eighth grade before leaving to go to work. Was before Juvenile Court only once, in 1927, for petty stealing, was released on probation, and has not been in further trouble since then. A mental test in 1931 revealed I. Q. 92.

Case 160. K. twins, Stanley and Joseph. Born February 2, 1915. Joseph is the larger and stronger of the two, also the more intelligent; but both boys are delinquent. They were admitted together to the St. Charles School for Boys, Illinois, on August 21, 1931. At the time of our observation of the case, which was in July, 1932, Stanley was still an inmate there. In the early part of 1929, Joseph, in company with several other boys, burglarized two houses and stole an automatic gun and other property amounting to nearly \$200. He was also involved with some adults in counterfeiting. At that time he was placed on probation. In March, 1931, Stanley, in company with some other boys, was arrested for stealing an automobile. He, too, was given probation. On August 6, 1931, both twins, in company with some other boys, stole a Chrysler automobile and were about to go to California in it, when they were arrested; this led to their commitment to the St. Charles School. Mental tests in 1931 revealed, for Stanley, I. Q. 76, for Joseph, 93. Both had done poorly at school, their Educational Quotients being, respectively, 71 and 79.

Case 161. D. twins, Roy Hugh and Charles. Born in Columbus, Ohio, December 17, 1917. Home and neighborhood conditions described as "deplorable." Roy is the less intelligent, more unstable, and more delinquent of the two. A mental test in 1932 revealed I. Q. 75. He

was first brought before Juvenile Court at 6 years, for setting fire to a house. He has been in court six times since then. He has been doing petty stealing from houses and stores since the age of 8 years. In February, 1932, Roy, Charles, and four other boys were arrested for breaking into several railroad cabooses and stealing food and clothes amounting to \$50. In June, 1932, Roy was again arrested, together with three other boys, for breaking into 50 or more refrigerator cars. On June 4, 1932, he was placed in the Boys' Industrial School at Lancaster, Ohio. At the time of our observation of the case, which was in July, 1932, he was still an inmate there. His record at the institution had been rather poor, marked by "disobedience, impudence, and fighting." Charles has been before the Juvenile Court five times, twice for truancy, twice for stealing, and the last time, in February, 1932, for participating with the gang in breaking into the railroad cabooses, as mentioned above. He was then let off with a suspended sentence. There is no record of a mental test in his case.

Case 162. G. twins, Kenneth and Carl. Born in Van West, Ohio, December 14, 1917. The father is in the Ohio Penitentiary for grand larceny; he had encouraged the twins to steal and to defy the law. Kenneth is definitely subnormal in intelligence; a mental test in 1930 revealed I. Q. 68. In Carl's case there is no record of a mental test. At school Kenneth fought his teachers because "they tried to run him." On September 15, 1928, Kenneth was committed to the Boys' Industrial School at Lancaster, Ohio, for "wrecking a train, burglary, stealing a bicycle, puncturing automobile tires, and using profane and obscene language." On March 4, 1930, he was released on parole, but had to be returned on April 9, 1930. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there. Carl had also been before Juvenile Court repeatedly. The court records contain the following statement: "Wholly bad and vicious; record of continuous violations of the law; has been associated with his twin in practically all his misdemeanors. Carl is a confirmed blackguard and liar. They are probably the worst pair we have had before the court." Carl was committed to the Boys' Industrial School at Lancaster, Ohio, on February 9, 1930; escaped March 8, 1930; returned April 10, 1930; escaped again September 11, 1930; returned again March 20, 1931; paroled September 2, 1931. On December 15, 1931, he fell from a roof he was climbing and was killed.

Case 163. D. twins, Lottie (male) and Andy. Born in East Orwell, Ohio, September 24, 1915. The mother died when the twins were 4 years old. Father remarried. Home very poor and crowded. Counting the stepbrothers and stepsisters, there were seventeen persons living in a small four-room house. The twins have been before Juvenile Court repeatedly for stealing, mainly food, chickens, milk from porches, supplies from ice boxes, etc. On the occasion of his last appearance in court, Andy was given a suspended sentence and has been working at odd jobs on neighboring farms. In the early part of 1932 Lottie stole some money from a neighbor's house, and on May 4, 1932, was sent to the Boys' Industrial School at Lancaster, Ohio. At the time of our observation of the case, which was in July, 1932, he was still an inmate there. A mental test in 1932 revealed I. Q. 64. There is

no record of a mental test in Andy's case; but he, too, is judged to be subnormal in intelligence.

Case 164. N. twins, Peter and Joseph. Born in South River, New Jersey, February 2, 1914. These boys were committed together for "incurability" in February, 1927, to the State Home for Boys at Jamesburg, New Jersey. Under outside pressure and against the advice of the parole committee they were released on parole in August, 1928. They were returned as parole violators on September 10, 1929. Soon thereafter they were transferred to the State Colony for Feeble-minded Males at New Lisbon, New Jersey. At the time of our investigation of the case, which was in August, 1930, they were still inmates there, "behaving as well as could be expected, Peter working in the dining room and Joseph in the store room." Mental tests in 1928 revealed, for Peter, I. Q. 64, for Joseph, 59.

Case 165. F. twins, Flenard and Odie. Part Negro. Born in Tennessee, February 5, 1916. Parents seem to be subnormal in intelligence, very poor, home is dirty. In 1928 and 1929 Flenard was before the Juvenile Court four times for stealing, breaking into a print shop, and breaking into a commission house. On June 5, 1929, he was finally committed to the Boys' Industrial School at Lancaster, Ohio; escaped July 19, 1930; granted parole August 1, 1930; discharged from parole October 2, 1931, to let him return to his parents in Tennessee. Odie was first brought before the Juvenile Court at the age of 13 years for stealing. He has been in court for similar offenses four or five times since then. The last time he burglarized a store and was committed to the Boys' Industrial School at Lancaster, Ohio, on March 18, 1932. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there. He is described as "incurable at home, in school, and on the streets." Mental tests in 1929 and 1932, respectively, revealed, for Flenard, I. Q. 62, for Odie, 56.

Case 166. C. twins, Sidney and Thomas. Born in Toronto, Ontario, Canada, May 19, 1914. The mother is of subnormal intelligence; an older sister of the twins is an imbecile, one brother has "dementia praecox," another brother is considered "psychopathic." The twins were born in the eighth month of gestation and both were retarded in walking and talking. They have been together in all their delinquencies, Thomas invariably as the leader, Sidney as the follower. In June, 1923, they were before the Juvenile Court for getting into two houses under construction and doing about \$700 worth of damage. In November, 1923, they were again in court for breaking into a house and stealing. They were at first given probation, but their delinquencies continued, and on February 7, 1924, they were committed together to the Ontario Hospital at Orillia, Canada. At the time of our observation of the case, which was in August, 1932, they were still inmates there. Mental tests in 1923 and 1928, respectively, revealed, for Thomas, I. Q. 85, for Sidney, 53.

Case 167. Y. twins, Roy and Ray. Born in Colton, California, April 2, 1910. Parents were separated when the twins were still young; four children in the family were born out of wedlock; all children, including the twins, were neglected, often cared for by charitable

neighbors. According to the rather incomplete records delinquencies began when the twins were barely 13 years old. Roy is less intelligent and more delinquent than Ray. A mental test in 1924 revealed, for Roy, I. Q. 84; no record of a mental test in Ray's case. Roy came to the attention of the Juvenile Court in February, 1923, on account of persistent truancy and "being troublesome in every way"; soon thereafter stole a bicycle, committed many petty thefts, wandered about "without visible means of subsistence," ran away repeatedly from his father's home. In November, 1923, the twins, together with two other boys, broke out of the Juvenile Detention Home in Colton, went to Los Angeles, there stole a car and started north, but were intercepted by the police. Roy was then committed to Whittier State School; transferred to Sonoma State Home in February, 1924; from there again transferred to the Preston School of Industry at Ione, California, in February, 1925; finally discharged routinely upon attaining the age of 21 years, on April 2, 1931. Ray was committed to Preston School of Industry on February 8, 1928, for grand theft (automobile); was tried on parole twice, in 1929 and in 1930, but had to be returned for parole violations, although his conduct at the institution had been at all times uniformly satisfactory. He, too, was routinely discharged upon attaining the age of 21 years.

Group 35. Adult criminality; subnormal intelligence; both affected. 2 cases: Nos. 168-169.

Case 168. M. twins, Samuel and Morris. Born in Detroit, Michigan, July 11, 1913. They were "unwanted children." Samuel seems to be the less delinquent of the two; both have a speech defect, but Samuel's is the less pronounced; Samuel is also somewhat the more intelligent; mental tests in 1929 revealed, for Samuel, I. Q. 73; for Morris, 66. Samuel is classified not as presenting a case of adult criminality, but as a juvenile delinquent, as he seems to have gotten along without serious difficulty since he attained the age of 18 years. Morris, however, at the time of our investigation of the case, which was in June, 1932, was serving an indeterminate sentence of 5 years to life in San Quentin Prison, California. Both twins were troublesome from early childhood; reported by the parents as uncontrollable and incorrigible; did poorly at school, disliked school, played hooky. They quarreled with each other and were hardly ever together. Both sought odd jobs to make money for clothes, to go to dances, "for a good time." Morris had run away from home repeatedly for days or weeks at a time. They have been before Juvenile Court repeatedly on charges of "unlawful use of automobile," traffic violations, larceny, robbery, "carrying an unregistered gun," etc.

Case 169. F. twins, Mike and Walter. Born in Lyons, Oregon, July 6, 1904. Mike is the less intelligent and the more markedly criminal of the two. Mike is a truck driver, single, served in the county jail at Centralia, Washington, in 1929-1930, for 6 months, charged with stealing a car; was then tried and sentenced to the Washington State Reformatory for from 1½ to 15 years. At the time of our investigation of the case, which was in May, 1931, he was still an inmate there. A mental test in 1930 revealed I. Q. 81. Walter is a farmer, married; he

has been arrested four times for drunkenness, and on one of these occasions was charged also with illegal possession of liquor. Served a term of 6 months in the county jail at Albany, Oregon, in 1928. No other criminal record. There is no record of a mental test in his case, but he is judged to be of normal intelligence.

Group 36. Child behavior difficulties, preneurotic and prepsychotic types; normal intelligence; one affected. 7 cases: Nos. 170-176.

Case 170. F. twins, Seymour and Eugene. Born in New York City, December 23, 1919. Observed by us in their home in New York during their school vacation in the summer of 1931. The birth of the twins was premature by about a month. Seymour was the weaker of the pair at birth and the slower in development subsequently. He could not hold up his head, walk or talk until he was 18 or 19 months old; presented a feeding problem until the age of 4 years, including rickets; was very sickly through his childhood; is three terms behind Eugene at school, and is less intelligent than Eugene,—I. Q.'s, respectively, 97 and 119. He alone, of the pair, has always presented a behavior difficulty—according to our classification, of preneurotic or prepsychotic type. Parents state he is nervous and unstable, "now in good spirits, then suddenly, for no apparent reason, becomes dizzy and stubborn"; is jealous of Eugene's progress at school, fights with him, destroys his things, disobeys his parents, has been given to excessive masturbation from infancy in spite of all efforts to make him stop—including beating and shaking him. Eugene is an excellent student, has skipped a grade in school, is highly praised by his teachers, spends all his spare money on books (which Seymour, in temper, sometimes destroys), is helpful and cooperative at home.

Case 171. R. twins, Fred and Alfred. Born in Fullerton, California, June 25, 1919. Observed by us in October, 1931, in one of the Fullerton city schools. Both twins are of very superior intelligence; but Fred alone, the more intelligent of the pair, with an I. Q. of 142, presents a behavior difficulty—according to our classification, of preneurotic or prepsychotic type. Fred is described as very disobedient in school. Although he has the highest I. Q. in the school, he won't do his work, and hence just gets by, whereas Alfred makes the best grades in class. When asked by the teacher to do anything, he invariably refuses and feels abused and "picked-upon." He is aggressive toward the other children on the playground, starts fights frequently, and then comes with tales of persecution. Insists that the other boys bully and mistreat him and that the teacher "has it in for him" because he won't be her slave. Alfred has an I. Q. of 127; is described as "a fine manly chap"; a good student, making the best grades in his class. He is a great reader, chiefly interested in popular science, "at present working on an airplane, which he is doing very creditably." He is easy-going, allows himself to be bullied and dominated by Fred.

Case 172. S. twins, Robert and Richard. Born in Long Beach, California, July 3, 1919. Observed by us in November, 1931, in one of the Long Beach city schools. Both twins are of normal intelligence;

mental tests in 1929 revealed, for both, I. Q. 104. Robert alone, of the pair, presents a behavior problem. The parents are separated; the twins are with their mother, who is of a very emotional type. Robert is frail physically, has been much coddled and petted by his mother, and is excessively dependent on her, wanting to be with her all the time; he cries when separated from her even for a few hours; wants to be petted frequently, still sleeps with his mother, and cries when she has to go out in the evening and leave him. The mother encourages him in this attitude, says it would break her heart if he were not affectionate. She says, "Bob is just like me, whereas Dick is heartless like his father." Robert has a special reading difficulty, also stammers somewhat; is in a special reading class. Richard is a rather good student, good athlete, "a pleasant, frank, normal boy"; indifferent to Robert, though not hostile; is well adjusted in school, gets on well with playmates.

Case 173. C. twins, Claire and Francis. Born in Champaign, Illinois, October 23, 1917. Observed by us in April, 1931, through the courtesy of the Department of Psychology and Research of the Los Angeles, California, city schools. Claire was brought to the attention of the Department of Psychology and Research, by reason of a lack of interest in his school work, an outstanding spelling difficulty, and a resulting retardation: he is in the B7 grade, whereas Francis is in the A8. Claire was given a mental test in 1929, which revealed I. Q. 91. Francis has never had any trouble; no record of a mental test, but he seems normal in intelligence, as well as in every other way.

Case 174. P. twins, Morris and Jacob. Born in Brooklyn, New York, May 15, 1915. Our observation in July, 1931, through the courtesy of the Institute for Child Guidance, New York. Morris was the weaker of the pair at birth; and is the one who has turned out to be the less intelligent, presenting a chronic behavior difficulty. He was a tiny baby, not quite 3 pounds, lifeless and inert at birth, had to be resuscitated. A mental test in 1931 revealed I. Q. 100; at the same time Jacob's test revealed I. Q. 136. In personality and achievement Morris presents a marked contrast not only to his twin brother, but also to the other children in the family. He is a school failure, has no job, shows "complete lack of interest in everything." He repeated one primary grade and failed twice in grade 8B. Teacher reports he is capable of doing good work, but is "the laziest boy she ever saw." Morris has played hookey many times and has been warned by truant officer; has no recreational interests; will sit or lie down, or just toss a ball in the air for half an hour or more at a time; is a day dreamer, much preoccupied with ruminations on sexual matters. Jacob does excellent work at school, has just graduated from high school, grades all A's and B's; now has a job and works well, turns over his pay check to his mother, is planning to work his way through college.

Case 175. N. twins, Benham and Fred, Jr. Born in California, May 19, 1915. Observed by us in March, 1932, in one of the Pasadena, California, city schools. Benham is the less intelligent of the pair, also the one with the behavior difficulty. Fred had a mental test in 1928, which revealed I. Q. 113; Benham, at the same time, was

found to have an I. Q. of 98. The father of the twins, a teacher, says they have never been able to do anything with Benham; he has not been resistive, but always utterly indifferent to anything the parents said to him. "He lives his own life with no regard for others, though not unkind." Has indulged in runaway escapades at least a dozen times: usually has gone off for one or two days and, upon return, gives no explanation as to where he has been or why he went. "Over a week ago he ran away from home and has not yet been located."

Case 176. H. twins, Edwin and George. Born in San Francisco, California, October 31, 1909. Observed by us in September, 1931, through the courtesy of one of the Long Beach, California, city high schools. Both twins are of mediocre intelligence; mental tests revealed, for Edwin, I. Q. 97, for George, 90. Edwin alone has presented a behavior difficulty; at school he had a reputation for general irresponsibility, work seldom prepared, frequent tardiness, lost books; his merit record was usually near the borderline; his speech is a little thick, showing a slight impediment. He was always good natured, however, and was well liked; no vicious habits noted. Edwin did not graduate from high school, but withdrew in 1928, at nearly 19 years of age, when his twin brother graduated. Since then he has held a number of jobs, but usually only for a month or two. He quits because "the boss is rude" to him; thus, when working at the Ford plant, he knocked his supervisor down, because he did not like the way he corrected him. George graduated from high school with a "C" average and a good merit record. His teachers commend him for his "steady, solid qualities." Since graduation he has worked as a salesman of marine insurance and has done exceptionally well, earning over \$10,000 last year.

Group 37. Child behavior difficulties, predelinquent types; normal intelligence; one affected. 2 cases: Nos. 177-178.

Case 177. M. twins, Virgil and Veath. Born September 22, 1916. Observed by us in March, 1932, in one of the junior high schools in Los Angeles, California. Both are of mediocre intelligence; mental tests in 1930 revealed, for Virgil, I. Q. 90, for Veath, 94. Veath is described by his teachers as "a fine boy, no trouble at all, a good average student." Virgil alone presents a behavior difficulty; the school authorities consider him one of their worst problems; he is in the office for some misconduct constantly: "he ditches, cheats, and lies; is suspected also of bad sex habits."

Case 178. S. twins, Frank L. and Harold. Born in Colton, California, August 2, 1912. Observed by us in September, 1931, through the courtesy of one of the Long Beach, California, city high schools. Both twins are of mediocre intelligence; mental tests revealed, for Frank, I. Q. 91, for Harold, 90. Harold has presented no problem; he graduated from high school in February, 1931, with a "C" average; "rather slow, steady, reliable boy"; personally neat and clean, attractive; worked outside of school, helping his father in his poultry

business. Frank was in high school four years, but never got beyond sophomore standing. Merit record ranged from 55 to 43 ("100 is perfect; below 80, send for parents; below 70, suspension"); was suspended for various misdemeanors at least once every term. Violent temper; on several occasions, when corrected by teachers he had tantrums, destroying textbooks and his desk. His father is also a man of violent temper; reported to have beaten Frank more than once until he was unconscious. Frank also truanted repeatedly, hanging around pool halls. Cheated at school. "His performance never equalled an I. Q. of 90; more like 60 or 70." Reported untruthful, forged mother's signature to excuses, caught using slugs in gum and peanut machines; appropriated other pupils' books and pens without asking, then left them lying around anywhere. Unclean in person, always emitted offensive odor; swore and used vile language; "a chip on his shoulder" all the time.

Group 38. Juvenile delinquency; normal intelligence; one affected. 3 cases: Nos. 179-181.

Case 179. P. twins, Edgar and Edward C. Born in Pomona, California, May 4, 1916. Edward presents no problem either in studies or in behavior. Edgar is of normal intelligence; mental test in 1930 revealed I. Q. 106; but "since the time he walked his conduct has been difficult to control." At school in Pomona he fought on the slightest pretext, was insolent to the teachers, created a general disturbance almost daily, finally was expelled for stealing and truancy at the age of not quite 11 years. A study was then made of his case by the Los Angeles Child Guidance Clinic, and he was placed on a ranch in Simi Valley, California. He escaped from there a couple of times, but stayed altogether about 8 months. Upon return home and reentering public school, he was soon again expelled and was arrested for theft. After a few weeks in the Detention Home he was committed to Whittier State School, California, and, at the time of our investigation of the case, which was in December, 1930, he was still an inmate there. He is said to have improved materially during his stay at Whittier; "he likes music, and is in the Band Cottage."

Case 180. A. twins, Roy and Robert. Born in Chicago, Illinois, February 17, 1915. Robert has never caused trouble at home, at school, or elsewhere. Roy has always been troublesome; at home fought with his stepfather; at school had a poor record of attendance; also has been repeatedly in conflict with authorities. He is of average intelligence; mental test in 1931 revealed I. Q. 99. His official record of delinquencies begins with an arrest for speeding on March 31, 1931; his driver's license was suspended for 8 weeks. On June 1, 1931, he was again arrested for speeding; license again suspended. On August 28, 1931, he was arrested for burglary and forgery of checks; was allowed to go home on probation, after spending about 3 weeks in jail and in Juvenile Hall.

Case 181. E. twins, John and Branch. Part Negro. Born in Ogden, Utah, November 22, 1914. Branch has never been in any trouble; good worker. John got in trouble on June 29, 1932, apparently

for the first time. A police officer was about to arrest a friend of his on a charge of illegal possession of liquor, when John interfered with the officer, took the gun from him and struck him. A fight followed, in the course of which John was subdued and handcuffed, but nevertheless succeeded in making his escape with the handcuffs on. A warrant for his arrest was issued, but he was not found until the early part of August, 1932. At the hearing before the Juvenile Court he was committed to Preston School of Industry, at Ione, California, but was granted a stay of execution and released to his grandmother. At the time of our investigation of the case, which was in October, 1932, he was still with his grandmother, "doing fine, a good helper in the home."

Group 39. Adult criminality; normal intelligence; one affected. 17 cases: Nos. 182-198.

Case 182. G. twins, Tony and Charles. Born in Sicily, Italy, June 18, 1912. Charles has never been in trouble; he stated that although he and Tony had always lived together, they never went around with the same friends; he feels that Tony's associates were the cause of his getting into trouble. He stated further that he and Tony were so different that he sometimes wondered that they were twins; they were entirely different not only in physical appearance but also as to personality. Tony has a history of five arrests and was finally committed to the reformatory at Elmira, New York, on April 10, 1931, for robbery, second degree. At the time of our investigation of the case, which was in November, 1932, he was still an inmate there.

Case 183. C. twins, Lloyd and Floyd. Born in Spokane, Washington, March 10, 1912. Only Lloyd has a criminal record; Floyd, as well as the rest of the family, is free from such record and in good standing in the community. Lloyd's record begins with a 5 days' sentence to the city jail in Long Beach, California, in 1932, for drunkenness. He has long been subject to frequent headaches from unknown cause. In November, 1932, he held up a night clerk in the lobby of a hotel at the point of a gun, got some money, and escaped. About 6 weeks later, as he was "walking home at 5 o'clock in the morning," he was stopped and searched by police officers who found a gun on him. He was later put through a police "show-up" and identified by the hotel clerk whom he had robbed. He was thereupon charged with robbery with a gun and entered a plea of guilty. He was sentenced to San Quentin Prison for 5 years to life. There is no record of a mental test for either twin, but they are obviously of normal intelligence; both had completed 3 years of high school, then left to go to work.

Case 184. R. twins, Kenneth and Edmund. Born in Mt. Carmel, Illinois, August 6, 1910. The family is of good standing and free from criminal record; Edmund has never been in trouble of any kind; only Kenneth has shown antisocial traits, and these are possibly attributable to a cerebral trauma at the age of 7 years. At that time the twins were engaged in killing a mole, for doing which they were to earn a dollar. Kenneth was accidentally struck on the head with an axe, was

laid up for 3 months, now has a 2-inch scar on head. Trouble started upon his return to school; he developed a dislike for school, although he was easily able to obtain better than average grades; became disobedient, refusing to do assigned work; annoyed teachers by bringing live snakes into class, etc. However, he completed the eighth grade and went to high school for 3 months, then quit, because he was "girl-crazy." At 16 years he enlisted in the Army (Coast Artillery), but soon was court-martialed for forgery of checks (three counts, total \$90), and served about a year in military prison on Alcatraz Island, California. He received a dishonorable discharge from the Army; but almost immediately upon his release from military prison he committed forgery again (three counts, total \$400) and was committed to Preston School of Industry, Ione, California, in 1927. After 14 months there he was given parole, and soon thereafter spent 2 months in the Los Angeles county jail for violation of parole. In 1928, at the age of 18 years, he married; after a baby was born he failed to support his wife and child; wife divorced him, and he was ordered to pay alimony and provide for his child. However, in 1930, he served 6 months in the Los Angeles County jail for failure to provide; and in 1932, was again sentenced to jail for failure to provide, this time for a term of 2 years. At the time of our investigation of the case, which was in November, 1932, he was still an inmate there.

Case 185. I. twins, Michael and Douglas. Born in Seattle, Washington, May 6, 1908. Michael's official record of criminality begins with an arrest in Seattle, Washington, in July, 1930, "on suspicion of pimping"; but he was released on account of insufficient evidence. Within a month he was again arrested on suspicion of robbery, and once more released for lack of sufficient evidence. He was arrested for the third time in September, 1930, for grand larceny—theft of automobile—and this time convicted and sentenced to the State Reformatory at Monroe, Washington. At the time of our investigation of the case, which was in May, 1931, he was still an inmate there. He made this statement: "I stole a LaSalle car at Spokane, Washington, and drove it to Lewiston, Idaho, where I rented a garage and stored it. I had just taken out the car to use it when an officer arrested me. I had sold one tire." A mental test in October, 1930, revealed I. Q. 92. Douglas has never been in difficulty.

Case 186. T. twins, James and Taffy. Part Negro. Born in Philadelphia, Pennsylvania, February 6, 1909. Taffy seems perfectly normal; he finished eighth grade; quit school because of illness; has never been arrested, says, "I never expect to be; there is as much difference between James and me as day and night"; works as an auto mechanic, has held present job for 5 years. James got only as far as the sixth grade in school; not interested; failed in deportment a number of times; was arrested a number of times for drunkenness and reckless driving, "forgot the names of the penal institutions" in which he had been incarcerated at various times; on several occasions got in trouble for car thefts; claims, however, that he never really stole one, but would merely take a car and, when through using it, would leave it near where he got it. On November 14, 1930, he was sentenced to the Eastern State Penitentiary at Philadelphia, Pennsylvania, and at

the time of our investigation of the case, which was in July, 1932, he was still an inmate there. No record of a mental test for either twin, but both are judged to be of normal intelligence.

Case 187. T. twins, Leonard Darby and Leon. Born in Athens, Oregon, August 7, 1907. Leon has never been in trouble; there is no record of a mental test for him; he is, however, judged to be of superior intelligence; is a gas engineer by occupation. Leonard's prior history is very meager. In November, 1930, he was sentenced to the State Reformatory at Monroe, Washington, for from 3 to 20 years, for two counts of forgery, first degree. He stated: "I forged and cashed six or seven checks. I cashed them at Grand View and at Sunnyside, Washington. I realized about \$490 in cash. I made the checks payable to myself and forged John W.'s signature." A mental test, upon admission to the reformatory, revealed I. Q. 96. At the time of our investigation of the case, which was in May, 1931, he was still an inmate there.

Case 188. F. twins, Warden F. and Wiley Thomas. Born in Gordonville, Texas, December 8, 1906. One brother of the twins "liked to be a hobo"; would ride on freight trains for hundreds of miles, then work for a few weeks, then start out on the road again. The family history is otherwise negative, except for familial tendency to twinning: one sister of the twins has a pair of twin boys; the maternal grandmother was a twin; one maternal aunt was a twin; two maternal aunts bore twins, one of them having two sets of twins. Wiley has been free from delinquency or criminality and has presented no behavior difficulty of any kind. Warden alone has been in trouble, mainly on account of drunkenness. He has always been of "nervous, impulsive" temperament; has a scar on scalp, $1\frac{1}{2}$ inches long, incurred in knife fight with a Filipino. Was married for 2 years; now divorced; no children. At the time of our investigation of the case, which was in January, 1933, he was serving a term of 180 days in the Los Angeles County jail for drunkenness.

Case 189. C. twins, Tony and X (name withheld). Born in Los Angeles, California, April 8, 1905. X is married, got along well in school and since, is a building contractor, has never been arrested. Tony alone is criminal, and has been more or less troublesome since the age of 10 years. There were two prior convictions, for gambling, in 1926 and in 1927. He was married, but could not adjust himself to domestic life, and is now divorced. In November, 1929, he was sentenced to San Quentin Prison, California, for from 5 years to life, for robbery, first degree (hold-up with a gun). At the time of our investigation of the case, which was in June, 1931, he was still an inmate there. There is no record of a mental test, but he is judged to be of normal intelligence; completed tenth grade in school.

Case 190. N. twins, James Garland and Harlin. Born in Okemah, Oklahoma, January 22, 1903. Both twins were employed in a bank; they lived together and were closely associated all their lives; yet Harlin was never in any trouble, has never been arrested. James alone robbed the bank for which he was working and, on February 14, 1931, was sentenced to the State Penitentiary at Salem, Oregon, for 5 years, for

grand larceny by embezzlement. There is no record of a mental test for either twin, but they are both judged to be of normal or superior intelligence.

Case 191. H. twins, Elliot R. and X (name withheld). Born in Fall River, Massachusetts, June 8, 1903. These twins come of good family and X has always been a law-abiding citizen. Elliot is said to be "a sexual pervert" of some kind. At the time of our investigation of the case, which was in August, 1932, he was in the State Prison at Howard, Rhode Island, for murder. The history of his case is to the effect that on the evening of March 23, 1931, he took a young nurse for a ride; next day she was found choked to death by the side of the road, with evidences of a severe struggle. He disappeared for four or five days, but was then apprehended.

Case 192. La P. twins, Theodore and Rovald. Born in St. Eugene, Quebec, Canada, August 8, 1903. Rovald has never been in trouble, is described as "a steady, reliable man"; lives in Canada, has good position and salary. Theodore, too, had had no trouble previously; is a steam engineer; has been in California since 1927. Was arrested for the first time in his life in August, 1932, charged with grand theft, two counts, and, shortly thereafter, convicted.

Case 193. S. twins, John Michael and James. Born in Indiana, February 6, 1901. James has never been arrested and has never shown any antisocial traits. "There is a great personality difference between the men, John being much more careless and happy-go-lucky." There is no prior criminal record in John's case, but it is suspected by his own relatives that he had committed crimes before but was not caught. On June 7, 1928, he was sentenced to San Quentin Prison, California, for first degree robbery on the highway, two counts; and at the time of our investigation of the case, which was in April, 1931, he was still an inmate there.

Case 194. J. twins, Edwin and Alfred. Born in Hamburg, Germany, March 23, 1899. These twins come of good family; Alfred has never been in trouble; Edwin alone has shown criminal inclinations. In 1921 he embezzled \$1,953 from his employer; his father made restitution and the charge was not pressed. In May, 1922, he was again arrested for embezzlement, and was this time sentenced to the Reformatory at Elmira, New York, where he remained 14 months. Almost immediately upon his release, in 1923, he was again in trouble: he was entrusted with \$500 which he was to exchange at the bank for German currency and deliver to a designated person; he never delivered it; on that occasion was given a suspended sentence in Hoboken, New Jersey. Finally, on March 31, 1930, he was sentenced to Sing Sing Prison at Ossining, New York, for 10 years, for embezzlement. For a period of about 6 months prior to his last arrest he had been failing to deposit money to his employer's account and using the money for himself, "mainly for gambling and a generally good time." The total amount was nearly \$10,000. His wife left him on account of his disgrace; but, at the time of our investigation of his case, which was in November, 1932, he was looking forward to release from prison after a few years by obtaining commutation for good behavior, and stated

that he felt sure that he could "patch it up" between his wife and himself.

Case 195. B. twins, Leon and Benjamin. Born in Philadelphia, Pennsylvania, December 11, 1896. The family is entirely free from criminal tendencies, and none among them, other than Leon, has been addicted to liquor or drugs. Benjamin has been entirely normal. Leon alone has been in trouble, and this began at the age of 17 years or before. He began then to use heroin and 2 years later began using cocaine as well. Has since had a couple of cures, but without lasting benefit. He has a prior record of numerous arrests on charges of robbery, entering and larceny, unlawful possession and use of narcotics, etc.; has skipped bail; was in the county jail in Philadelphia on two occasions; served 18 months in the Federal Penitentiary at Atlanta, Georgia. Finally, in the latter part of 1931, he entered a cordial shop, held up the proprietor with a gun, obtained a few dollars from the cash register, then, as he tried to escape in a taxicab, he was pursued by a policeman. Leon shot and killed the policeman, was convicted for murder, and executed in Sing Sing Prison, New York, in March, 1932.

Case 196. W. twins, Harold F. and Stephen R. Born in Philadelphia, Pennsylvania, May 14, 1887. These twins come of excellent family. Stephen is a high-ranking official, somewhat impulsive, erratic, but never in trouble. Harold graduated in medicine from Harvard; in 1914 volunteered for surgical service in the Canadian Army for the World War; was honorably discharged in 1919. Soon thereafter, without known cause—possibly as a sequel of an unrecognized encephalitis while in the military service—he became persistently criminal and has passed under at least six aliases, besides his own name. His record—only in part—includes 3 months in the Massachusetts House of Correction, in 1920, for larceny; again, for 6 months, in 1921; lost his medical license; enlisted in the U. S. Army in 1926; deserted within 2 weeks; was court-martialed and served 6 months in prison, dishonorably discharged from the Army. In 1927 enlisted again under an assumed name, but was soon discharged for "undesirable traits, including sexual perversions." There were other offenses and convictions. Finally, in November, 1929, he was convicted in Los Angeles on three counts of forgery of checks, and sentenced for a term of 4 years. The checks were issued in payment for a diamond ring, some haberdashery, etc.; and one check was issued to a beauty parlor operator in payment for a permanent wave that the defendant had had. Possibly his maladjustment is based in part on a chaotic sexuality.

Case 197. K. twins, Charles Alonzo and Howard. Born in Pennsylvania, in November, 1859. Howard has never been in trouble. Charles' record, too, has been perfectly clean up to the time of the present trouble which happened in 1931. He had been a respectable member of the community up to the age of 71 years; was dairyman, later storekeeper and postmaster. His store burned down, whereupon he was charged with arson, tried, and convicted. He denies guilt; friends, too, question his guilt, as the store and stock were valued at more than the amount of the insurance.

Case 198. C. twins, Tom and George. Born in Tausendtown, Maryland, September 17, 1841. George was a normal individual, supported his wife and child, was killed at Antietam in the Civil War. Tom has always had an ungovernable temper; was arrested several times for fighting. Finally, in 1926, at the age of nearly 85 years, in an altercation with a man he shot him in the arm and the man bled to death. Tom was convicted and sentenced for life to the Eastern State Penitentiary, at Philadelphia, Pennsylvania. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there, though 90 years old.

Group 40. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; one affected. 2 cases: Nos. 199-200.

Case 199. S. twins, Frank Stanford and Stanley. Born in Long Beach, California, January 1, 1915. Stanley is described by his teachers as "just an average boy." Very tranquil by temperament, in sharp contrast with Frank; he is also larger and more robust physically. A mental test in 1928 revealed I. Q. 93. He is not a specially good student, and not a leader in any way, "just one of the boys." He is a grade ahead of Frank and might have been further on, but was kept back at parents' request. They were anxious to keep the two boys together, although they are not special pals. Frank is physically greatly retarded, small in stature and underweight. He also made a poorer showing in the intelligence test: I. Q. 81. Scholastically he is decidedly inferior to Stanley; his grades have been mostly "presents," and at that he is behind grade—in eighth grade at 16 years. Our observation of this case was in November, 1931, in one of the Long Beach, California, city schools. Frank's behavior difficulty is described by the teachers and by the school psychologist as follows: "He is emotionally very unstable; when corrected in his work he breaks down and cries, turns pale, and on one occasion last year, when reprimanded, he fainted. He is very wilful, generally refuses to do what is asked. He knows he does things he shouldn't do, but trusts his physical condition will get him off. When reprimanded, he stays at home, ill in bed, for a day or two. Constantly demands encouragement and coddling."

Case 200. M. twins, Frank and Joseph. Born in Brooklyn, New York, May 18, 1912. Birth was difficult, instrumental, in Frank's case by breech presentation. Joseph has gone through school and has worked normally; no record of mental tests, but he seems of average intelligence. Frank has been weak from birth, could not sit up until 2 years, started to walk at 4 years. He was placed in the Children's Hospital and School, Randall's Island, New York, on May 16, 1924, and discharged as unimproved to the custody of his mother on November 17, 1924. Our investigation of the case was in July, 1931. He has a spastic paralysis with markedly exaggerated knee-jerks, more pronounced on right side; he is also left-handed, and has double internal strabismus; speaks indistinctly. He also presents behavior difficulty at home: has temper tantrums, fights with brothers and

sisters, stamps his feet, screams, throws things. A mental test in May, 1923, revealed I. Q. 56.

Group 41. Child behavior difficulties, predelinquent types; subnormal intelligence; one affected. 2 cases: Nos. 201-202.

Case 201. H. twins, Vinton and Victor. Born in Kansas, August 13, 1915. Vinton has always been the stronger physically and is taller by 5 inches than Victor. He has, however, been inferior intellectually. At the time of our observation of the case, which was in April, 1931, Vinton was in the "development class" in the Torrance, California, elementary school, while Victor was in the first year of high school at Wilmington, California. Mental tests, in 1928 and 1931, respectively, revealed, for Vinton, I. Q. 75; for Victor, 99. Vinton presents a behavior difficulty; he is much larger physically than the other pupils in the school which he attends, is very profane, leads the smaller boys into mischief of all kinds. Victor presents no behavior problem whatever, "is almost too reserved."

Case 202. W. twins, Earle E. and Edward N. Born April 11, 1914. Observed by us in March, 1932, in one of the Los Angeles, California, city schools. Mental tests in 1931 revealed, for Earle, I. Q. 77, for Edward, 121. Edward is an excellent student, popular with his schoolmates, prominent in various school activities, president of the senior class. There is also a marked physical contrast, Edward being the taller by 4 inches. Earle is doing poorly in studies, not interested, "ditches" classes about 2 days a week, is generally sulky and sullen, seems especially to dislike his twin brother and his parents, perhaps from envy of Edward.

Group 42. Juvenile delinquency; subnormal intelligence; one affected. 2 cases: Nos. 203-204.

Case 203. DiM. twins, Jim and Joseph. Born in Denver, Colorado, June 1, 1917. On October 9, 1930, Jim, in company with another boy, was arrested and placed in Juvenile Hall and charged with a morals offense. He had forced a 2½-year old boy to take his penis into his mouth; the little boy went home to his mother, vomiting and sick for several days. Jim had not been in trouble previously. Had done rather poorly in his studies at school. Mental test in 1930 revealed I. Q. 89. At the hearing before the Juvenile Court he was released on probation. Joseph has never been in trouble: "a good boy"; no record of a mental test.

Case 204. S. twins, Joseph and John. Born in Blackstone, Massachusetts, November 1, 1915. Joseph has always been the smaller and weaker of the twins physically and of subnormal intelligence. A mental test in 1931 revealed I. Q. 66. Home conditions good. He caused no trouble until he left school at about 16 years. At that time he began to stay out late, would not appear for meals, went around with boys mostly younger than himself. In December, 1931, he and two other boys stole a car, ran it about a block, crashed into a tele-

phone pole, then got out and ran away. At home he got a gun, shot a bullet through a door and another through the fleshy part of his hand. On December 16, 1931, he was placed in the Sockanosset School for Boys, at Howard, Rhode Island. At the time of our investigation of the case, which was in August, 1932, he was still an inmate there. There is no record of any mental test in John's case. He is described, however, as normal and well adjusted in every way, and is self-supporting.

Group 43. Adult criminality; subnormal intelligence; one affected. 1 case: No. 205.

Case 205. W. twins, Elmer and Arthur. Born in Pittsburgh, Pennsylvania, April 30, 1901. The father and one brother of these twins have criminal records; the mother was in an institution for the insane. Arthur has never been in any trouble, is married, supports his family, is a brakeman on the Pennsylvania Railroad. Elmer has been a behavior problem since childhood. Would not go to school, would sleep away from home, did very poorly in his studies, reached but the sixth grade when he left school at the age of 17 years. Mental test in 1930 revealed I. Q. 80. Has done very little work; has been in and out of correctional and penal institutions since the age of 7 years. Has used at least two aliases; crimes have consisted of trespassing, larceny, robbery, breaking and entering, escaping from custody, putting poison in food, etc. He has served terms in Thorn Hill School, Warrendale, Pennsylvania; State Farm, Green Castle, Indiana; U. S. Disciplinary Barracks, Governors Island, New York; State Reformatory, Mansfield, Ohio; Minnesota Training School at Red Wing; and committed twice to Western Penitentiary at Pittsburgh, Pennsylvania, last time in January, 1930, for from 3 to 6 years for robbery. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there.

§ 6. SAME-SEX DIZYGOTIC TWINS: FEMALE

Group 44. Child behavior difficulties; preneurotic and prepsychotic types; normal intelligence; both affected. 6 cases: Nos. 206-211.

Case 206. L. twins, Dora and Rhoda. Born in Los Angeles, California, November 17, 1925. Referred together to Los Angeles Child Guidance Clinic in November, 1928, at the age of 3 years, as presenting "a practically identical disciplinary problem: they are hard to manage; both show enuresis; somewhat negativistic." Stanford-Binet tests showed, for Dora, I. Q. 105, for Rhoda, 100.

Case 207. Z. twins, Christine and Josephine. Born in Long Beach, California, April 15, 1923. Our observation in September, 1931, in one of the Long Beach city schools. Family live in a good neighborhood, own their home, and mother always keeps children clean and neat. Parents were divorced in the summer of 1931. Christine is dark, resembles mother; Josephine is blonde, resembles father. Both present behavior problems, almost identical except that Jose-

phine's are more marked; both are somewhat cross-eyed, Josephine more so than Christine. "They are holy terrors; fight with each other, with their mother, and with the other children in the neighborhood; a favorite sport is slipping up behind other children, pinching them, and running away and hiding. They call out nasty names and remarks to passers-by. Both are cruel to animals; disliked and feared by other children, especially Josephine."

Case 208. F. twins, Emma and Irma. Born in Bunker Hill, Kansas, February 6, 1917. Referred together to Los Angeles, California, Child Guidance Clinic on September 11, 1930, as presenting a behavior problem. "Both are failing at school. Emma is rebellious toward mother, tyrannizes over her twin sister, is resentful of any interference or discipline, is flighty and irritable. Irma is thoroughly dominated by her twin sister, somewhat more amenable to mother; but she, too, becomes sulky when criticized." Stanford-Binet tests revealed, for Emma, I. Q. 98, for Irma, 91.

Case 209. K. twins, Mary and Ruth. Born August 31, 1916. Observed by us in March, 1932, in one of the junior high schools in Pasadena, California. They are of normal intelligence, I. Q.'s 98 and 94, respectively, by Stanford-Binet tests. Their teachers report them as presenting a constant behavior problem: "They bully the other pupils, fight, smash other pupils' property, are rude to teachers, and defiant of authority. They are unclean and untidy, but use much make-up and are boy-crazy and markedly aggressive. They come from a very poor home, the father beats them until the neighbors interfere; the mother yells at them."

Case 210. D. twins, Armena and Angelina. Born in San Diego, California, in August, 1915. Observed by us in December, 1931, in the San Diego Children's Home. Both are of approximately normal intelligence, I. Q.'s 96 and 98, respectively, by group test. There was in the family an older pair of twin girls: one, very badly deformed, died in infancy; the other was mentally deficient and, when about 12 years of age, was committed to the Sonoma State Home, California, but escaped from there with a man who had come for her, posing as her father, and has not been heard from since. Both twins present behavior problems, but Armena more markedly: "From earliest infancy she has had temper tantrums. Often she was very helpful and agreeable; but fully half of the time she spent seeing how many rules she could break and in what ways she could defy authority. She would bite and scratch those who came near her, break dishes, and tear the bedding. She is emotionally very unstable, hilariously dancing and singing one moment, and then suddenly breaking into tears for which she would give no reason." "Angelina is not so temperamental, but is quite inclined to be sullen. She is unwilling to do her share of tasks about the home, and sulks when asked to do so. She is not so good a mixer as Armena." The mother of these twins is chronically psychotic and has been in the Patton State Hospital for several years.

Case 211. McK. twins, Rosie and Rose. Born in Bakersfield, California, December 11, 1914. Our observation in October, 1931, in

one of the Long Beach, California, junior high schools. Both girls are educationally retarded, Rosie mainly by reason of her behavior difficulty based on emotional instability; Rose on account of sub-normal intelligence. Mental tests revealed, for Rosie, I. Q. 92, for Rose, 84. Both girls have repeated the fourth and the eighth grades, barely passing grades the rest of the time. Rosie alone presents a behavior problem: "Has temper tantrums, both at home and at school, when reprimanded, but recovers quickly from them. She is very talkative, exceedingly active, always rushing from one thing to another, boisterous; too rough in athletic games; her temper gets her into difficulties with her playmates as well as with her teachers." Rose is rather sedate. The twins differ in their friends and in most of their tastes. They seldom go or play together.

Group 45. Child behavior difficulties; predelinquent types; normal intelligence; both affected. 3 cases: Nos. 212-214.

Case 212. N. twins, Muriel and Ruby. Born in Tulsa, Oklahoma, December 19, 1922. Our observation in November, 1931, through the courtesy of the County Welfare Bureau, San Diego, California. "They live next door to a grocery store and are constantly in trouble for their pilfering. When reprimanded by the grocer they retort by throwing stones at his windows and destroying anything left outside." They are reported also by the health nurse as unclean in personal habits. Regarded as "almost incorrigible." "They are constantly together and indulge in the same escapades, though Muriel seems to be the leader."

Case 213. N. twins, Betty and Patsy. Born in San Diego, California in 1919. Our observation in December, 1931, through the courtesy of the San Diego County Welfare Bureau. These girls are reported by the Public Health Nurse as being "guilty of almost every delinquency possible; stealing has been outstanding, not only by the twins, but also by other members of the family." Sex delinquencies are also reported. In addition are enumerated "frequent trauancies, lying, cheating, bad language, impudence, and defiance." They were excluded from one school, and "the feasibility of placing them and their three other sisters in some institution is being considered."

Case 214. MacF. twins, Ruth and Theresa. Born in Escondido, California, in 1915. Our observation, in the public school at Escondido, in December, 1931. The problem of these girls has been chiefly a sexual one, although there has been considerable truancy also. "They were found in a place of bad repute when a raid was made in the fall of 1931. They have both been mixed up in several sexual escapades with boys in the school and with men in town." The school principal feels they are a very bad influence on the other children and steps should be taken to exclude them from the school. They are always together and their problems are the same.

Group 46. Juvenile delinquency; normal intelligence; both affected. 2 cases: Nos. 215-216.

Case 215. G. twins, Martha and Mary. Born in Salt Lake City, Utah, July 24, 1914. Observed by us in April, September, and October, 1932. Parents had been separated for some years. Girls were continually absent from school, spent much of their time in a soft-drink place with men. At home they would sit around, refuse to help mother in the housework, go out with boy friends in the evening. They were dirty, infested with lice. Arrested many times at wild parties; were taken to Juvenile Hall, Los Angeles, in December, 1930, when they were both found to be infected with gonorrhea, and Martha had, in addition, syphilis. They were also given to petty thefts; once, when arrested, they had in their possession a number of articles they had stolen from a ten-cent store; they confessed that this was a habit of theirs. Mental tests revealed, for Martha, I. Q. 106, for Mary, 99.

Case 216. C. twins, Carol and Florence. Born in Los Angeles, California, November 11, 1911. Our observation in September, 1932. The family consists of the parents, three older well-adjusted children, and these twins. Parents stated, "there have been no difficulties with the other children, but the twins have been a nuisance ever since they were born." During elementary school years they were considered unmanageable, vile-minded, dressed indecently. In junior high school their behavior was consistently bad, and for over a year they were not allowed to attend. There was a great deal of promiscuous sex activity, going around with a gang of about 40 boys and men, frequenting a garage evenings where the men stood in line awaiting their turn. In July, 1927, Carol was caught in an attempt to run away to San Francisco as a stowaway on a steamer. In September, 1927, the twins, in company with a third girl, were arrested for forging and passing nine checks ranging from \$3 to \$36. They were then placed in Juvenile Hall, Los Angeles, and were granted probation. At that time they were separated and placed in homes as mothers' helpers. There has been no trouble since then. In February, 1929, they were discharged from parole and soon thereafter allowed to return to school. At the time of our observation (1932) both were married and well adjusted; "seem to be very nice young women now." Mental tests, in 1927, revealed, for Carol, I. Q. 98, for Florence, 91.

Group 47. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; both affected. 5 cases: Nos. 217-221.

Case 217. L. twins, Lorna and Donna. Born in Los Angeles, California, February 26, 1925. Our observation in April, 1932. Both are of dull-normal intelligence; I. Q.'s, respectively, 87 and 82. Lorna alone presents a behavior difficulty. She has temper tantrums: "When the least annoyance or obstacle is encountered she flies into a rage, screams, yells, kicks, throws herself on the floor, then finally bursts into a spell of violent crying which does not stop until she is absolutely limp. These incidents are of daily occurrence and sometimes oftener."

Case 218. K. twins, Emma and Irma. Born in National City, California, in 1922. Our observation in December, 1931, through the courtesy of the Public Health Nurse, National City. Both twins are of subnormal intelligence and educationally retarded, being in the second grade at the age of 9 years. There is no record of mental tests. Irma alone presents a behavior difficulty; she has been crippled since birth; described as "exceedingly nervous and excitable, cries easily and flies into tempers whenever she can not accomplish what she sets out to do; does not mix well with other children, hits them when they get in her way; is a very unhappy child."

Case 219. B. twins, Thelma and Velma. Born in Taft, California, October 25, 1920. Our observation in 1932 in one of the Long Beach, California, city schools. These twins present behavior problems in that they are very uncooperative at home and at school, are "opportunity-room" cases. They are both of subnormal intelligence; Thelma more markedly so. Mental tests revealed, for Thelma, I. Q. 75; for Velma, 89.

Case 220. B. twins, Ethel and Elsie. Born in Santa Barbara, California, August 26, 1916. Our observation in 1931, through the courtesy of the Social Welfare League of Long Beach, California. Father of these twins is a sailor, deserted the family in 1917. Mother is feeble-minded, has mental age of 6 years. Mother has a younger child, an illegitimate son, who is a low-grade moron and very hard of hearing. Landlord requested that family be moved, as the children were so destructive and ill-behaved that they were causing other tenants to leave. Ethel is reported by school teachers as not getting along with other children: "quarrels and fights constantly; breaks school rules every day." Elsie has had epilepsy almost from birth. Stanford-Binet tests revealed, for Ethel, I. Q. 108, for Elsie, 84.

Case 221. C. twins, Eleanor and Evelyn. Born in Long Beach, California, October 17, 1912. Our observation, in one of the Long Beach city high schools, in October, 1931. Both twins are of subnormal intelligence; I. Q.'s, respectively, 82 and 85. Eleanor alone presents a behavior difficulty: "Her merit record the last semester was only 54 out of a possible 110 points, due to continuous refusal to obey rules. When she wishes to stay out of class or go off grounds she does so and makes no attempt to hide her action. She is sullen and, in the grade school, had a record of temper tantrums. She has quite a speech defect and declines to recite in class. Her behavior is in marked contrast with that of her sister Evelyn, who is of pleasing disposition and fairly popular. Eleanor, at times, shows jealousy of her twin; also seems to dislike her mother intensely."

Group 48. Child behavior difficulties, predelinquent types; subnormal intelligence; both affected. 5 cases: Nos. 222-226.

Case 222. McD. twins, Bernice and Beatrice. Born in California in 1916. Observed by us in December, 1931, in Long Beach city schools. Bernice is of slightly subnormal intelligence (I. Q. 86); Beatrice is

normal in that respect (I. Q. 96). Both present behavior difficulties, apparently due in large measure to their mother's mismanagement. "The mother is a rather elderly widow and determined that her daughters shall be mathematicians, as their father was. The girls haven't the slightest inclination toward a scholastic career, but the mother has hounded both them and their teachers to obtain her ends. She is out of sympathy with modern young people. She refuses to let the girls go out evenings, with the result that they escaped out of the window several times after they were supposed to be in bed and were found in dance halls on the Pike. In May, 1931, Bernice ran away with a sailor and was gone for about 2 weeks before she was found. The mother is having the marriage annulled and Bernice has been put back in Junior High School. Beatrice has not been quite so aggressive as Bernice in defying her mother, but her hatred for the mother is intense and she declares it openly, and vows she is going to run away. Her conduct at school with various boys has brought her into the office several times. Also she has forged her mother's signature a couple of times to notes giving excuses for absence. She is quite pretty and a good dancer, and says she is going on the stage, which is another source of conflict with the mother."

Case 223. K. twins, Mary and Clara. Born in Los Angeles, California, February 11, 1917. The home background is one of extreme poverty. The twins were observed by us in March, 1932, in one of the Los Angeles city schools. Both twins are retarded at school, Mary by 3 years, Clara by 2. Mental tests in 1932 revealed, for Mary, I. Q. 77, for Clara, 85. There is no behavior difficulty in Clara's case, but Mary has been in considerable trouble. The main problem is stealing, handkerchiefs being the chief item. She is also very untidy, wets herself daily, is very untruthful, and unpopular among her school-mates; she cries frequently and says the others pick on her. She is also physically undersized.

Case 224. C. twins, Mamie and Minnie. Born in Orange, California, in 1915. Observed by us in December, 1931, in one of the Orange city schools. Although there is no record of intelligence tests, the girls are obviously of subnormal intelligence, and retarded educationally: at 16 they are in the 7a grade. Their behavior difficulty, as reported by their teacher, consists in "stupidity and stealing." Minnie is said to be much more aggressive than Mamie, though they are usually together. Teacher believes that Mamie, by herself, would not get into trouble. "Mamie will do better what she is told, while Minnie is stubborn and defiant." In addition to many thefts of other children's things at school, there have been reports of their stealing fruit and candy from grocers.

Case 225. G. twins, Winifred and Dorothy. Born in San Diego, California, in 1908. Observed by us in November, 1931, through the courtesy of the San Diego County Health Department. The twins had done poorly at school, having reached but the sixth grade. There is no record of mental tests, but they are obviously subnormal in intelligence, estimated I. Q.'s between 60 and 70. While still at school, Winifred was mixed up in some sexual escapades. Soon after leaving

school, she married, but is nevertheless seen on the streets constantly, often with sailors, flashily dressed; bears a poor reputation around town. Dorothy has also been promiscuous, though not so conspicuously as Winifred. Soon after leaving school she had an illegitimate pregnancy; this resulted in miscarriage due to a venereal infection. Since then she has been under treatment for the venereal infection at the Public Health Clinic.

Class 226. E. twins, Martha and Margaret. Born in California, August 1, 1906. Our observation of them was in November, 1931, through the courtesy of the Fullerton, California, High School. Both twins are of somewhat subnormal intelligence; I. Q.'s, respectively, are 89 and 86. Both have also been persistent behavior problems. They were past 20 years of age when they entered high school, but were finally expelled in their second year there because of "grave sexual misconduct." Martha is generally known as a prostitute. Margaret has a child believed to be illegitimate, though she tells a tale of marriage to a man whom she later discovered to be already married. Margaret has worked more steadily and is considered a trifle more dependable than Martha. They work chiefly in packing houses in season.

Group 49. Juvenile delinquency; subnormal intelligence; both affected. 7 cases: Nos. 227-233.

Case 227. S. twins, Nora and Dorothy. Born in Hamilton, Ontario, Canada, July 27, 1917. The twins were born at full term, but the birth was difficult and accomplished with the aid of forceps. They attended a parochial school. Nora proved hardly teachable and became almost at once such a sex delinquent that she was considered a menace to the other children and the Sisters refused to have her at the school. As she approached maturity she became more and more of a problem, would run away from home, was having illicit relations with men, and finally the Big Sisters Association arranged for her commitment to the Ontario Hospital at Orillia, Canada, on December 11, 1931. At the institution she was found to be "a distinct sex problem"; also showed schizoid traits: "constantly grimacing and blinking; whenever approached she covers her face with her hands and will not look up; answers only in low monosyllables." A mental test in 1931 revealed I. Q. 57. Dorothy is much brighter, reached the sixth grade at 13 years. There is no record of a mental test, but her I. Q. is estimated at 85 or 90. At 13 she, too, had become a persistent sex delinquent, was considered incorrigible, and was committed for an indefinite period to the Home of the Good Shepherd.

Case 228. S. twins, Beulah and Eulah. Born in Imperial Valley, California, November 14, 1914. Beulah is the less intelligent of the twins, also the first to have gotten into difficulty. The twins have a second stepmother. In February, 1928, Beulah was first brought before the Juvenile Court as "incorrigible, disobedient, running out at night"; she had attempted suicide by drinking tincture of iodine; vaginal smear revealed venereal infection. She has since been before the court on two other occasions, was cared for in the Convent of the Good Shepherd from December, 1928, to March, 1929, and finally was

committed to the Los Angeles County institution for delinquent girls (El Retiro) on June 11, 1930. She escaped from there on August 4, 1930, and was returned the same day, and was still an inmate there at the time of our observation of the case, which was in January, 1931. A mental test in 1930 revealed I. Q. 79. Eulah has a much higher intelligence; in her case a mental test in 1928 revealed I. Q. 112. But she has also been a sex delinquent. She is described as of erratic temper, stubborn, unmanageable. First brought before the Juvenile Court in January, 1929. She was then put on probation, but violated it, and on July 1, 1929, was placed in the Convent of the Good Shepherd. From there she was released on March 7, 1930, but soon got into trouble again and on October 3, 1930, was committed to El Retiro (Los Angeles County institution). On December 15, 1930, she ran away from there, but was picked up within 2 days and placed in Juvenile Hall. At the time of our investigation of the case, in January, 1931, she was still there awaiting further court action.

Case 229. B. twins, Lila and Lola. Born in Bagley, Iowa, September 30, 1914. Mother is an invalid, has had three miscarriages in the past 3 years; also lost a set of triplets. The girls were known in the neighborhood as "high fliers, out nights, lazy, irresponsible." In June, 1930, they were reported by the family to the police as missing. On July 3, 1930, Lila was arrested in a drunken condition and taken to Juvenile Hall in Los Angeles. She then told of her and Lola's having started for Oregon by hitch-hiking; but they returned to Los Angeles and there lived with various men for several weeks. Lola then went off with a man and has not been heard from since. Lila was found to have a gonorrheal infection with kidney involvement; she remained under treatment in Juvenile Hall until September 4, 1930, when she was transferred for further treatment to the Los Angeles County General Hospital. Following her discharge from there in October, 1930, she, too, has been lost track of. A mental test of Lila in 1930 revealed I. Q. 69. There is no record of a mental test in Lola's case.

Case 230. S. twins, Madeline Pearl and Viola Jane. Born in Merlin, Ontario, Canada, January 10, 1915. The home background is poor; mother is epileptic and sexually promiscuous. The girls had "a bad reputation" from childhood. Madeline served a term in the London, Ontario, jail, "for indecent exposure," from July 16 to September 21, 1930; and another term "for lewd and licentious conduct," from May 23 to June 7, 1932. She was then committed to the Ontario Hospital, London. At the time of our observation of the case, which was in September, 1932, she was still an inmate there. In 1931 she had given birth to an illegitimate child (stillborn). A mental test in 1932 revealed I. Q. 45. On admission to the hospital she was found to have a gonorrheal infection. The admission note states that she was "profane in her language; kicked the nurse in the face; threatened suicide; talked chiefly of sexual experiences; at times refused food." Viola, too, is obviously of subnormal intelligence, judged to be on the level of high-grade moronism or borderline; works as domestic on a farm and "does not have a very good reputation." However, she has

not been in conflict with the authorities and is not considered to be definitely delinquent.

Case 231. McC. twins, Edith and Gertrude. Born in Toronto, Ontario, Canada, July 23, 1914. Home conditions unsatisfactory; father has a jail record; mother drinks and has a bad reputation. Edith has been an habitual truant from school and has been involved in some petty thefts. Gertrude has been a sex delinquent from the age of 12 years; at that age she was brought to the attention of the Juvenile Court. She was released, but continued to be promiscuous sexually, and in June, 1931, was discovered to be pregnant, and a blood test proved positive for the Wassermann reaction. On June 7, 1931, both twins were committed to the Groves School for Delinquent Girls in Toronto for supervision until they became of age. At the time of our observation of the case, which was in August, 1932, they were still inmates there. Mental tests in 1926 revealed, for Edith, I. Q. 78, for Gertrude, 86.

Case 232. H. twins, Eva and Elsie. Born in Toronto, Ontario, Canada, July 26, 1913. Mother is said to be immoral, unpopular in the neighborhood, and is alleged to have encouraged the twins in their misconduct. Both twins are of subnormal intelligence. Mental tests in 1926 revealed, for Eva, I. Q. 72, for Elsie, 64. Both are also juvenile delinquents. Eva was sent to the House of Industry, Toronto, on June 6, 1926, "for incorrigibility." She remained there until January 14, 1928. Soon after her release she became pregnant and in 1929 gave birth to an illegitimate child. On January 14, 1931, she was committed to the Edith Groves School for Delinquents in Toronto, and at the time of our investigation of the case, which was in August, 1932, she was still an inmate there. Her case is also complicated with epilepsy; convulsions began at the age of 1 year and have occurred since at the rate of about one a month. Elsie also has been promiscuous sexually, gave birth to an illegitimate child in February, 1930, and on May 4, 1930, was committed to the Ontario Hospital at Orillia, Canada. At the time of our observation of the case she was still an inmate there. She has never had any manifestations of epilepsy.

Case 233. F. twins, Lily and Pansy. Born in Peoria, Illinois, June 29, 1913. These girls were cared for in an orphanage until the age of 9 years, when they were placed in a foster home. As they matured, they became unmanageable and disobedient, persisting in running around with men at all hours. The orphanage refused to take them back, and in the summer of 1930 they were brought before the Juvenile Court. Both were placed on probation after employment had been secured for them as domestics. They did well as far as their work was concerned, and there has been no further difficulty with Pansy. Lily had to be repeatedly scolded for being out late, sometimes until 2 a.m., and finally, in November, 1930, she disappeared and was not located again until January 4, 1931. It was learned that she had been living with one man after another, associated with bootleggers, had been an inmate of a house of prostitution, etc. Accordingly, on February 20, 1931, she was committed to the State Training School for Girls at Geneva, Illinois. At the time of our observation of the

case, which was in July, 1932, she was still an inmate there. A mental test in 1931 revealed I. Q. 60. There is no record of any mental test in Pansy's case.

Group 50. Adult criminality; subnormal intelligence; both affected. 1 case: No. 234.

Case 234. C. twins, Rose and Lillian. Born in West Springfield, Massachusetts, May 3, 1897. The home background is very poor. Mother is illiterate and "has an extremely poor reputation"; is said to have encouraged the twins in their drinking and sexual promiscuity; both brothers have court records for theft and drunkenness; an older sister is epileptic; another sister has dementia praecox; none of the children in the family got beyond the fifth grade in school. The home is in a wretched neighborhood, disorderly, dirty, and has been under police surveillance as a suspicious resort. Rose has worked at odd jobs, but is usually idle. In 1914 the twins ran away from home and were found later dressed in boys' clothes, living in a shack by the river, and were arrested "for immorality and drunkenness." Lillian had been arrested on similar charges in 1913. Both have had illegitimate children and were infected with both gonorrhea and syphilis. Lillian has a congenital club-foot. She served a term in the Massachusetts House of Correction from January 20, 1919, to June 19, 1919. No record of a mental test in her case, but she is obviously of subnormal intelligence, estimated as in the degree of high-grade moronism or borderline. Rose was in the Massachusetts Reformatory for Women at Framingham from August 26, 1918, to April 7, 1920; again from April 11, 1922, to April 10, 1924; committed there for the third time on March 10, 1932. At the time of our investigation of the case, which was in August, 1932, she was still an inmate there. A mental test in 1923 revealed I. Q. 60. In the intervals between her residence in the reformatory she was an inmate of houses of prostitution, "an eye-sore on the streets," a hustler for her "pimp husband."

Group 51. Child behavior difficulties, preneurotic and prepsychotic types; normal intelligence; one affected. 14 cases: Nos. 235-248.

Case 235. P. twins, Claire and Carol. Born in California, December 30, 1926. Our observation in March, 1932, in one of the Pasadena, California, city schools. "Claire is excessively shy and timid; weeps almost continuously, not noisily, but quietly to herself. Can not be induced to participate in the little kindergarten games. Clings to her twin sister. Has to be taken home daily." They had attempted to start her in school one year previously, but had given it up because of her inability to adapt herself to school. "Now the parents are puzzled as to what to do with her." Carol, while somewhat shy, nevertheless cooperates well with the teacher and other pupils. "She mothers Claire and is always watching out for her."

Case 236. W. twins, Marie and Genevieve. Of mixed race, Negro-Indian-White. Born in San Diego, California, in 1926. Observed

by us in December, 1931, in the San Diego Children's Home. Marie has had temper tantrums almost since birth. "When she does not get every whim gratified, she kicks and howls and holds her breath till she goes limp. It is a fight with her every day to get her to drink her milk, another scene to get her bathed, etc." Genevieve is very placid and docile, seems normal in every way.

Case 237. S. twins, Lois and Lee. Born in Long Beach, California, February 21, 1925. Our observation in October, 1931, through the courtesy of a private reference. "Lois is very aggressive, with a violent temper, very disagreeable toward other children, slapping them if they will not obey all her commands. Her chief difficulties, with adults, have been from her fibbing—not merely giving false excuses for misbehavior, but spontaneously giving weird accounts of misdemeanors of other children chiefly directed against herself." Lee is a placid, helpful child, usually dominated by Lois; neat with her toys, whereas Lois is untidy. Lee usually picks up all of Lois' things for her and straightens up the cupboard.

Case 238. C. twins, Suzanna and Patricia. Born in Pasadena, California, November 11, 1924. Our observation in March, 1932, in one of the Pasadena city schools. These children are of very superior intelligence, I. Q.'s, respectively, 139 and 129. Suzanna alone presents a behavior difficulty: "She is painfully shy; shrinks when spoken to; can not be induced to recite in class or to take part in the games of other children; she cries silently whenever any pressure is put upon her to play with the others. She sits huddled up in her seat, either reading a book or gazing into space. Is immaculately neat and orderly." Patricia is also somewhat shy, but much less so, and adjusts satisfactorily.

Case 239. McL. twins, Ruth Elizabeth and Mary Irene. Born in Hynes, California, July 22, 1924. Our observation in October, 1931, in one of the public schools of Hynes. Ruth is the brighter child, Stanford-Binet test revealed I. Q. 107. Mary's I. Q. is 97. Ruth alone presents a behavior difficulty, in the nature of a schizoid temperament. Her teacher states: "Ruth is the most painfully shy child I have ever had to deal with. She does beautiful written work, but you simply can not get her to recite in class. When little contests or matches are on she will stand with her face to the wall, and will cry if any pressure is brought to bear to make her participate. No trouble whatever in any other respect." "Mary is a very sweet, charming child; shines better in class than Ruth, but does not do as good written work; is very popular with all her playmates."

Case 240. W. twins, Doris and Frances. Born in San Pedro, California, May 28, 1920. Observed by us in September, 1931, through the courtesy of the Social Welfare League of Long Beach, California. These twins, and their four brothers and sisters, were placed in a church home, when their mother died, and were practically abandoned by their father, who remarried, choosing a girl in her 'teens. Doris is of mediocre intelligence (I. Q. 90), and she alone presents a behavior problem: "Has trouble at school, is very untruthful; when

punished, laughs loudly and hysterically through it." Frances is brighter, I. Q. 115, seems never to have been a problem in any way.

Case 241. R. twins, Nancy and Jean. Born in Evanston, Illinois, November 18, 1918. Our observation in March, 1932, in one of the Pasadena, California, city schools. Both girls are bright, I. Q.'s, respectively, are 129 and 118. Nancy alone presents a behavior problem: "She is very quarrelsome, not only at school, but at home. The parents have come to the school counselor seeking advice as to what to do with her. She is impudent and defiant; constantly in conflict with her teachers. Haughty and overbearing toward the other pupils, and is disliked by them, has no friends. Every regulation is a challenge to her for defiance; she refuses to listen or respond to any reasoning or appeal; seems to especially dislike her twin." "Jean is a good student and a very sweet girl."

Case 242. R. twins, Marjorie and Margaret. Born in Santa Monica, California, July 21, 1917. Observed by us in October, 1931, in Long Beach, California. Marjorie alone presents a behavior problem. Her aunt states: "She is the most utterly lacking in affection of any person I ever knew. From infancy she has coolly and deliberately exploited for her own ends everyone with whom she has come in contact, giving nothing in return. Stronger than Margaret as a child, she tyrannized over her and pinched her and abused her till the family had to keep them in separate pens. Throughout school she has manifested the same traits, changing her friends on the basis of their serviceability to her, and teasing and tyrannizing over younger and smaller ones. When a baby is brought to the house she watches her opportunity to pinch it or otherwise hurt it. It is the same with pets. She has never cared for an animal, but always seeks to hurt them. Some of these incidents have been of long-drawn-out cruelty and she seems fascinated watching an animal suffer or die." She is bright in school, makes better grades than Margaret, but has been detected cheating several times. "She is a very good dancer, and at present wants to go on the stage via Hollywood." Margaret is described by her aunt as of "very lovable, affectionate disposition; considerate of others, helpful in the home; a good housekeeper, a neat and willing worker. She has a quick temper, but soon gets over it, and bears no grudges."

Case 243. W. twins, Vena and Verna. Born in Redondo Beach, California, January 15, 1915. Our observation in December, 1931, in the Redondo Union High School. "Vena just entered high school this last fall (1931), while Verna is 2 years ahead of her. In addition to being slower mentally, Vena has a violent temper. If she makes a mistake in her lesson, she tears up the paper, perhaps the textbook too, and throws things about. She has been sent to the office several times for discipline because of this." "Verna seems a nice, capable, average high-school girl, well liked by her companions, does fair work in school." There is no record of a mental test in either case, but they seem to be of normal intelligence.

Case 244. M. twins, Dora and Nora. Born in Milwaukee, Wisconsin, June 21, 1913. Our observation in December, 1931, in

Redondo, California, Union High School. Dora alone presents a behavior difficulty, which is based on an extremely schizoid temperament: "Her shyness is painful. She is dreadfully sensitive about her height and thinness." Dora is 5 feet 9 inches tall and weighs 115 pounds. Nora is 5 feet 4 inches tall and weighs 125 pounds. "Dora can not be induced to mingle in any of the gaieties of the young people, but goes off by herself and cries when parties are in progress. She does beautiful work in school, makes the highest grades in her class, and is greatly liked by her teachers who are much worried about her sensitiveness. The twins seem fond of one another, though Nora is a good mixer and is usually with the crowd having a good time, while Dora sits in her seat alone."

Case 245. P. twins, Victoria and Virginia. Born in California, in 1913. Our observation in November, 1931, through the courtesy of the San Diego County, California, Health Department. Victoria alone presents a behavior problem, based on a markedly schizoid temperament: "She has a very marked speech defect and is exceedingly self-conscious. She is also quite stout, and so remains excessively shy and retiring; seems to be very unhappy most of the time. Her nervousness and timidity are extreme. She does excellent written work, but can not be induced to attempt a recitation." "Virginia is just a normal, bright, attractive high-school girl."

Case 246. W. twins, Helen Regina and Lulu Carolina. Born in Belleview, Iowa, in 1913. Our observation in September, 1931, in one of the Long Beach, California, city high schools. Helen alone has a behavior difficulty, based on a markedly egocentric temperament. Described as "bold, aggressive, forward, can brook no rivalry. Her jealousy of her twin is outstanding: her disposition antagonized people, whereas Lulu's pleasant temperament made her very popular. Among young people Helen shines more at first meeting, but her irritability and aggressiveness soon cause her to lose friends. Lulu's popularity seems to infuriate Helen. Helen, also, is very bossy, completely dominates her twin. Helen doesn't like to stay at home, gets jobs as helper in other homes, but becomes dissatisfied or quarrels with mistress after 3 or 4 months and gives up or loses her job." Lulu is much more stable, more considerate of others, less selfish, has strong domestic tastes, is an excellent cook.

Case 247. B. twins, Mildred and Millicent. Born in Holly, Michigan, January 10, 1907. Our observation in August, 1932, through the courtesy of the Pontiac, Michigan, State Hospital. Mildred has had difficulty from birth, possibly due to a cerebral birth trauma. The difficulty increased and eventually led to a chronic psychotic condition. At birth Mildred weighed 5 pounds, was a blue baby, always frail. Had sinking spells during first week. Not a good mixer, never played with others, just looked on. Slower in developing than her twin, took a year longer to finish high school. A nail biter in childhood. Always jealous of her twin. At home always on the defensive. Described as "nervous and high-strung." In December, 1926, she had an illegitimate child, putative father disappeared. Around that time she seemed to be deteriorating mentally; became careless, undependable, at her job in

a factory would not apply herself, soon lost the job. Then was often noted talking and laughing to herself, refused to wash for several months, struck her mother, said people stole her thoughts, heard voices, expressed delusions centering around the father of her child. Finally was institutionalized, first in the Psychopathic Hospital at Ann Arbor, Michigan, for about 6 months; eventually, on August 3, 1931, was committed to the State Hospital at Pontiac, Michigan. At the time of our observation of her case she was still a patient there. The psychotic manifestations were mixed, i.e., both manic-like and schizophrenic. The course was at first interrupted by well marked remissions, but eventually became chronic. Millicent was healthier as a baby, got on better at school and later in a good job for 4 years. "Has always been very popular, a leader in sports and in sociability." Married in 1930, has a very healthy child.

Case 248. McG. twins, Clara and Lucy. Born in Southfield, Michigan, December 5, 1883. Our observation in September, 1932, through the courtesy of the Wahjamega, Michigan, State Hospital. Clara alone presented behavior difficulties, associated with epilepsy, and eventually leading to psychotic deterioration. The troubles began at birth and are probably due to a cerebral birth trauma. Clara weighed only $2\frac{1}{2}$ pounds at birth, whereas Lucy weighed 6 pounds. Clara was puny from birth, Lucy a healthy baby. Clara had convulsions several times daily for 6 weeks after birth. Cried a great deal as a child; had night terrors; walked at $2\frac{1}{2}$ years; talked at 4 years. "Always a behavior problem, hard to control, irritable; at 20 attempted to drown herself." At 14 years convulsions recurred, were at first irregular, with long remissions, eventually established themselves at the rate of 2 or 3 a week, of great severity, and often followed by a disturbed and violent spell. She was finally committed to the Wahjamega State Hospital on October 12, 1928, and at the time of our observation of the case was still an inmate there. Lucy was a healthy baby, walked and talked before she was a year old, always larger and more robust than her twin. "She is normal in every way, exceptionally bright, is married."

Group 52. Child behavior difficulties, predelinquent types; normal intelligence; one affected. 9 cases: Nos. 249-257.

Case 249. K. twins, Marie Phyllis and Ruth. Born on June 3, 1917. Our observation in March, 1932, in one of the Pasadena, California, city schools. Marie, though the brighter of the two, is the one presenting a behavior difficulty. Mental tests, in 1930, revealed, for Marie, I. Q. 123, for Ruth, 106. "Marie has been suspended from three different Pasadena schools for her behavior. It has been chiefly of a sexual nature, personal exhibitionism and teaching sex practices to other pupils. She is also untruthful and a ditcher, forging excuses, and trying to lie out of her escapades. She is decidedly a leader wherever she is, and is regarded as a very bad influence." Ruth seems quite normal in every way.

Case 250. B. twins, Dorothy and Evelyn. Born in New York City, September 18, 1915. Our observation in July, 1931, through the courtesy of the New York Institute for Child Guidance. Parents divorced; mother illiterate, not very intelligent; she is unreliable, apparently leading an immoral life. Dorothy weighed 5 pounds at birth, was the weaker of the twins. She has been tried for adoption several times, but her extremely antisocial activities made her removal necessary. Reports from these foster homes state that she refused to wash and dress, went to other apartments and smashed things, swore and used vile language. Bedwetter until age of 7 years. "Now she seems to have a great deal of surplus energy and is over-active. Dislikes baths, difficult to make her take one. Has had sex experience. She states that she was attacked by an older boy in one of the foster homes; also that the janitor attacks her every time she goes to the basement." Has a record of stealing and lying since the age of 9 years. In school she "likes to tell on others"; is disorderly, inattentive, fidgety in class; always has too much money and has various stories as to how she came by it. A Stanford-Binet test in 1925 revealed I. Q. 91. Evelyn has been adopted since the age of 5 years. Reported by Home for Hebrew Infants to be "a normal, bright, attractive child; was placed in an excellent private home where she would have every advantage."

Case 251. C. twins, Edna and Eurette. Born in suburb of Toronto, Ontario, Canada, in 1915. Our observation, privately arranged, in October, 1931, in Santa Monica, California. These twins were separated at birth, when Eurette was taken to be brought up by her grandmother. Eurette thus received a very strict upbringing and became "a sweet, submissive type." Edna was retained by her parents and brought up with every indulgence. "As a young girl in the lower grades she was mixed up in several sex escapades, and acquired also quite a reputation for untruthfulness. Twice in the summer of 1931 she disappeared from home for about 3 days each time, and was found, in both instances, in rather notorious night clubs, drunk. She was also mentioned in connection with some stolen goods which had been found in the possession of some youngsters she was with, but she seemed to have been too drunk to know anything about it. Her parents are very religious, think there is something wrong with her mentally, and that she should have treatment in a sanitarium."

Case 252. E. twins, Roberta and Genevieve. Born in Zion, Illinois, November 10, 1918. Our observation in May, 1935, in one of the Los Angeles, California, city high schools. These twins are of mediocre intelligence, both have an I. Q. of 92. The twins were born prematurely, at 7 months, and both together weighed not quite 6 pounds. Genevieve is quite normal, has never presented any behavior problem, is dominated by Roberta. Roberta was a difficult problem from birth, probably due, at least in part, to a cerebral birth trauma. She came as a breech presentation; the midwife had difficulty in delivering the head. She was a blue baby and had to be resuscitated by being dangled by the feet and spanked. Her training in bowel and bladder control was very difficult; mother had to resort to coaxing, bribes, threats, and finally whipping and switching to make her quit soiling herself. There was no such difficulty with Genevieve. At the age of 3 years Roberta

went through a severe attack of scarlet fever, was in a coma for 4 weeks. Roberta ran away from home frequently, almost as soon as she learned to walk. She had to be tied by a rope in the yard in order to keep her at home. She was "mischievous and into everything"; also made up fantastic stories. When disciplined by being sent to bed she would scream so loudly as to alarm the neighbors. After a quarrel with a little boy in primary school, she got a knife and cut up his rubbers. She was in general overbearing toward other children, and always dominated and imposed on her twin. At 16 she began to have sexual experience with a boy at school, and there was some difficulty in preventing her eloping with him.

Case 253. H. twins, Margaret and Mildred. Born in Georgia, April 6, 1915. Our observation in one of the Long Beach, California, city high schools. Margaret is much the more intelligent of the twins. A Stanford-Binet test revealed I. Q. 135; whereas Mildred's I. Q. turned out to be 93. Mildred is a good houseworker, presents no problem, is her mother's favorite. Margaret is studious, being in that respect unlike the rest of the family and in general conflict with them, especially with Mildred. Margaret has the ambition to become a teacher of mathematics. Her mother says, "This child is a brain worker, never able to do much with her hands." She is also described as impulsive and excitable. Her delinquency was brought to light through the following episode: "The case came before the Juvenile Court and Margaret was subpoenaed, with another girl, after they had jointly written some obscene literature, which was found by the school authorities." Margaret was put on probation and later dismissed.

Case 254. G. twins, Mary Louise and Betty Jane. Born in Detroit, Michigan, July 8, 1915. Our observation in January, 1934, through private reference. The parents were separated when the twins were very young. The twins were placed in an orphanage and from there adopted, together, at the age of 3 years. Betty Jane has never been a problem, was always favored by her own parents and by others since, which caused Mary Louise to be jealous and antagonistic toward her. At the time of our investigation of the case Betty Jane was in junior college preparing for the career of trained nurse. Mary Louise's behavior problem grew more difficult with time. In junior high school she did not work, cribbed, was boy-crazy. Later was placed in art school, but did not do much better; "was on the street most of the time." "In past 2 or 3 years has been running with boys, sneaking out of the house, disobeying, etc. In 1933 began having sexual relations." Described as being of violent temper, given to lying, generally unadjusted. "Does not want to work. Once, when placed in a job, she forged a note threatening the kidnapping of a child, in order to be fired, sent home, and not have to work."

Case 255. J. twins, Edith and Mary Jane. Born in San Jacinto, California, in 1913. Our observation in December, 1931, through the courtesy of the San Diego County, California, Health Department. "It was not generally recognized that these girls were twins, because of their unlikeness. They did not go together." The unlikeness existed from birth, when Mary Jane weighed 12 pounds and Edith but 5

pounds. "Mary Jane made a very excellent record at school and is now at Scripps College. Is reported to be a very superior girl in every respect." Edith has been a problem for some years. She did not complete her high school course. Since leaving school she has been a waitress in a small cafe in a poor section of the town. "Has acquired an unsavory reputation; has not lived at home for about 2 years; is syphilitic and is being treated for it at the San Diego Clinic."

Case 256. B. twins, Armine and Irene. Born in Tuscolla, Texas, July 21, 1910. Our observation in June, 1932, through the courtesy of the State Hospital at Abilene, Texas. Armine is normal in every respect: "A graduate of a business college and working in a restaurant. Now successfully and happily married." Irene has the residuals of an infantile cerebral palsy, the left arm being partially paralyzed and atrophied. From the age of 7 weeks she has been subject to epileptic seizures, but these were not very frequent, and she was able to go to school until her graduation from high school at the age of 18 years. She did not go to work because of her paralysis, but drifted into sexual promiscuity, and was finally picked up on the street as a prostitute. She was found also to have "florid secondary syphilis." On account of her disabling paralysis, epilepsy, and sex delinquency she was committed to the Abilene State Hospital on September 10, 1930. At the time of our observation of the case she was still an inmate there.

Case 257. B. twins, Ruth and Josephine. Born in Coldwater, Ontario, Canada, in 1910. Our observation in August, 1932, through the courtesy of the Toronto Psychiatric Hospital. An older sister of the twins has been in the Ontario Hospital at Woodstock for some years, on account of epilepsy which began at the age of 17 years. Ruth has presented a behavior problem, characterized by instability, from early childhood. While still in elementary school, at 16 years, she became pregnant and contracted syphilis. Her illegitimate baby was born in May, 1927, in the Haven (a detention home for unmarried mothers in Toronto). After a few weeks she escaped from there in the night, together with another girl. At the age of 20 years she began to have epileptic seizures, sometimes as many as three in one day. In February, 1931, she became depressed, bought some arsenic, and threatened to end her life. She was taken in custody and, while at the police station, tried suicide again by turning on the gas, but was detected. She was then placed in the Toronto Psychiatric Hospital, and later sent to the Women's Farm at Toronto. Josephine has been free from behavior difficulty, epilepsy, or any other serious trouble.

Group 53. Adult criminality; normal intelligence; one affected. 1 case: No. 258.

Case 258. F. twins, Ethel and Edith. Part Negro. Born in Quincy, Illinois, April 15, 1898. Our observation in July, 1932, through the courtesy of Dwight Reformatory, Illinois. Edith has presented no problem of any kind. Ethel's criminality seems to have consisted of an isolated episode, occurring at the age of 34 years. A Stanford-Binet test, administered in 1932, revealed I. Q. 105. Her offense was petty larceny, and the sentence was for 6 months in Dwight Reform-

atory, Illinois. "Ethel had an 8-grade education. Thereafter worked with her mother as maid in the railroad depot. She is married and has a daughter $3\frac{1}{2}$ years old. Has never been discharged from a job. Former employer speaks highly of her. Her husband was shot while gambling. No other member of her family has ever been in trouble. In her own case there is no history or evidence of prior criminality. She took 2 dresses from a girl at the boarding house where she was working. The girl recognized them on her on the street, and had her arrested."

Group 54. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; one affected. 7 cases: Nos. 259-265.

Case 259. H. twins, Eva Florentine and Edith Ernestine. Born in Roanoke, Virginia, October 5, 1925. Observed by us in one of the Long Beach, California, city schools. Florentine was then repeating kindergarten, while Ernestine had progressed to the first grade. Mental tests in 1931 revealed, for Florentine, I. Q. 60, for Ernestine, 91. Ernestine presents no behavior problem or difficulty of any kind. Florentine, on the other hand, is a problem both at home and at school. She seems to crave attention constantly, and, to gain it, will throw herself on the floor, pound the floor with her head, or will have a temper tantrum, yelling and kicking. The other children in the kindergarten seem to fear her and will not play with her. A recommendation has been made to put her in a special school for problem children, "not only for her sake but, also for that of the other children in the class."

Case 260. L. twins, Elizabeth Mary and Gertrude Florence. Born in Canada, November 8, 1919. Our observation in August, 1932, through the courtesy of the Toronto Psychiatric Hospital. The mother of these twins died when they were 2 years old, and at that time they, with three other children, were placed in the Protestant Children's Home. Soon the twins were separated, Gertrude being placed for adoption in a good home in St. Mary's, Ontario. "At 13 years she is in the first year of high school and is doing very well. Has always been very healthy. Her foster parents are very fond and proud of her." Elizabeth has been paralyzed since birth or early infancy. She walks with a limping, shuffling gait; arms move jerkily, hands are held in partial flexion, and she manipulates them poorly. No history of conditions at birth is available, but her clinical appearance suggests a cerebral birth trauma as the etiologic factor. A Stanford-Binet test in 1932 revealed I. Q. 81. At the age of 6 years, by reason of her paralysis, she was placed in the Home for Incurable Children. There she showed frequent episodes of uncontrolled emotional outbursts, described as follows: "For a week she will be cheerful and acquiescent, and then has a devilish spell, screams, cries, smashes things, has to be forcibly restrained. During her calm spells she works well at her studies and is very attractive. At times she has shown a sullen vindictiveness." By reason of her psychotic spells, she was admitted to the Toronto Psychiatric Hospital on May 22, 1932. At the time of our investiga-

tion of the case she was still a patient there. Case notes, about a week apart, state: "Depressed spell, refused to eat, wanted to die, worrisome." "Cooperative and amiable." "Very irritable, destructive of clothing; screaming, crying, beating her head against the wall." "These spells rotate in about the same manner constantly."

Case 261. M. twins, Lorraine and Edna. Born in San Francisco, California, April 13, 1919. Observed by us in April, 1931, through the courtesy of the Department of Research, San Francisco city schools. A mental test in Lorraine's case, in 1929, revealed I. Q. 88. She was also "so unstable that she could not be handled in a regular class, and has therefore been in an ungraded class since January, 1927. Investigation also revealed that she was a congenital syphilitic with a three-plus Wasserman reaction." Edna is apparently brighter than Lorraine and has always made better progress in school. At the time of our investigation, she was in the sixth grade in a parochial school at the age of 12 years. She has never been called to the attention of the school authorities for any reason.

Case 262. B. twins, Violet and Viola. Born in Fresno, California, February 6, 1917. Observed by us in March, 1932, in one of the Pasadena, California, city schools. There is a marked contrast between the twins. Violet is physically much smaller and is subnormal mentally; she has done very poorly at school. Mental tests in 1930 revealed, for Violet, I. Q. 76, for Viola, 117. Violet is also very quarrelsome, bullies the younger girls, is impudent to the teacher, "a nuisance in the classroom"; she is very untruthful, blames others for her misdemeanors; cries a great deal, "from temper, not sorrow." Viola does very well in her studies and presents no behavior difficulty.

Case 263. S. twins, Helen and Hilda. Born April 5, 1915. Our observation in April, 1931, through the courtesy of the Bureau of Child Welfare, Berkeley, California. Hilda is of normal intelligence, Stanford-Binet I. Q. 103, was in high tenth grade at 16 years, has never presented any behavior problem. Helen is of subnormal intelligence, Stanford-Binet I. Q. 82, is educationally retarded, and is a problem in that she is "a scared girl all the time, makes very poor adjustments."

Case 264. M. twins, Dorothy and Mildred. Born in Winthrop, Massachusetts, May 29, 1913. The twins were brought up together and went to the same school, but when they reached the fourth grade Dorothy began to fall behind and gradually developed behavior difficulty, whereas Mildred went ahead without any trouble. Dorothy became restless, disliked school, would complain of pains or illness to evade tasks at school, said the noise of typewriters and the conversation of other children bothered her, was described as slovenly and lazy, developed an attitude of antagonism toward the teachers and toward her family, would have frequent temper tantrums, and finally became quite unmanageable and was referred for diagnosis and recommendations to the Psychopathic Institute of the Jewish Hospital at Cincinnati, Ohio, where she was under observation from September to November, 1928. A mental test in 1928 revealed I. Q. 79. This was in contrast to the result in Mildred's case, when her I. Q. had been found to be 110. On November 7, 1928, Dorothy was placed in the Hillcrest

School (for delinquent girls) in Cincinnati, and, at the time of our investigation of the case, which was in June, 1931, she was still an inmate there. In the new environment she has shown marked improvement and her temper tantrums ceased.

Case 265. II. twins, Edith C. and Mary Jane. Born March 19, 1913. Our observation in June, 1931, through the courtesy of the San Diego, California, High School. Edith is of subnormal intelligence (I. Q. 86), retarded educationally, and presents a behavior problem: "Retarded in school; failing in studies; behavior very eccentric. Can not get along with anyone except her twin. Given to boisterous outbursts. Is defiant and antagonistic toward the world. Has been excused from reciting in class because of the scenes she creates when called on. Refuses to make any effort; prefaces everything with 'I can't, I know I'm dumb.' Untidy, has habit of nail-biting. Takes no interest in anything except music. Plays 'cello with fair ability; spends many hours a day in practice." "Mary Jane does excellent work in school, in marked contrast to her twin sister. I. Q. 104. Is extremely devoted to Edith, shields her from the world, waits upon her, coaches her in her studies, takes her part in the many family quarrels."

Group 55. Child behavior difficulties, predelinquent types; subnormal intelligence; one affected. 2 cases: Nos. 266-267.

Case 266. B. twins, Goldine and Geraldine. Born in Cedar County, Missouri, March 25, 1918. Our observation in June, 1931, through the courtesy of one of the junior high schools of San Diego, California. "Goldine is failing in her studies; is at present in sub-standard group. She is abnormally sex-curious; giving of sex information fails to satisfy her curiosity. She is always involved in obscene jokes and stories; draws obscene pictures. She is indolent at home, and takes no part in household tasks which are willingly performed by her twin sister. She is exceedingly jealous of the twin sister and is not at all companionable with her; there is no intimacy between them." Intelligence tests in 1930 revealed, for Goldine, I. Q. 89, for Geraldine, 106. "Geraldine is doing average work in school and is apparently perfectly normal in every way."

Case 267. D. twins, Vera and Velma. Born in Needles, California, August 22, 1917. Our observation in September, 1931, in one of the Long Beach, California, junior high schools. Both girls are educationally retarded, being in the 6B grade at 14 years. However, Velma's grades are B's and C's, while Vera's are mostly D's. Vera is in the lowest section of her grade. Stanford-Binet tests in 1931 revealed, for Vera, I. Q. 86, for Velma, 92. "Vera has been in trouble for the past 2 years, because of affairs with boys. A number of notes were secured which she had written to various boys. These notes referred to assignations, and much obscene language was used. When confronted with them, she made no attempt to disown them, but seemed proud of her success."

Group 56. Adult criminality; subnormal intelligence; one affected. 2 cases: Nos. 268-269.

Case 268. R. twins, Minnie and Ethel. Born in Brooklyn, New York, May 17, 1913. Minnie left school at 14 years "because of a fit of melancholia." Since then she has shown much instability, would stay out late nights and refuse to account for her comings and goings, would frequent night clubs in the colored section of the city, was promiscuous sexually, especially with colored men, had an illegitimate pregnancy and an induced abortion in 1931, was described as "a street walker." In the spring of 1932 she was placed in the Kings County Psychopathic Hospital, Brooklyn, for mental observation, but was pronounced "not insane, but unstable, neurotic, and impulsive." She was committed to the Westfield State Farm (reformatory for women) at Bedford Hills, New York, on May 10, 1932. At the time of our observation of the case, which was in November, 1932, she was still an inmate there. A mental test in 1932 revealed I. Q. 77. Ethel has been normal in every respect, had a course in business college, and has been steadily employed and highly regarded by her employers over a period of years. No record of a mental test, but she is obviously of average intelligence or above.

Case 269. II. twins, Mary and Agnes Helen. Born in Odell, Illinois, December 2, 1909. Observed by us in July, 1932, through the courtesy of Dwight Reformatory, Illinois. Poor home background. Mary attended rural school; through eighth grade at 16 years. She married at 18, divorced 2 years later. Stanford-Binet test in 1931 revealed I. Q. 86. She has worked some at housework on farms. Admits she has practiced prostitution since 18 years of age, saying, "it pays better than housework and is easier." Pregnant twice, both aborted; husband had full knowledge and encouraged her. She was finally arrested for being an inmate of a house of prostitution in Streator, Illinois, and committed to Dwight Reformatory on September 25, 1931. At the time of our observation of the case she was still an inmate there. At the time of her admission there she had a gonorrheal infection and her body was covered with impetigo. "Outstanding in her personality is her emotional instability. She tells wild tales about her adventures, obviously untrue. Thinks people are trying to 'get her in bad'; seems to borrow trouble. Careless about her work, though willing." Agnes is living at home and helping her mother. Unattractive, languid type. There is no record of a mental test, but she seems to be of normal, though mediocre, intelligence. Her conduct, too, must be counted, under the circumstances, as within normal limits. She admits freely and indifferently that she has gone out some with Mary and men—doesn't know how many; but she has never been in a house of prostitution and has no court record.

§ 7. OPPOSITE-SEX TWINS

Group 57. Child behavior difficulties, preneurotic and prepsychotic types; normal intelligence; both affected. 3 cases: Nos. 270-272.

Case 270. P. twins, Martin and Sarah. Born in Cincinnati, Ohio, January 23, 1917. Our investigation of the case was in June, 1931, through the courtesy of the Psychopathic Institute of the Jewish Hospital in Cincinnati, where both twins had been under observation. Martin had convulsions in infancy, but none thereafter. He has since had a problem consisting of persistent bedwetting. The main feature of his case has been that of very poor progress at school; he has not been able to learn to read and write. A mental test in 1924 revealed I. Q. 73, a showing which, of course, does not fully account for his complete reading disability. Sarah's difficulty has been of a different sort. She has an intelligence well above the average; a mental test in 1928 revealed I. Q. 116. She has done well in her studies at school. She also has a history of bedwetting; talks in her sleep. Has a behavior problem suggesting prepsychotic manifestations: restless, irritable, unreliable, unable to concentrate, emotionally unstable, now highly elated, and now greatly depressed.

Case 271. H. twins, Philip and Phyllis. Born near El Cajon, California, in 1925. Our observation in December, 1931, in the El Cajon public school. "Since starting to school in September Phyllis has cried a major portion of every day. She seems fearful of everything, jumps and screams in terror if a book or a pencil drops in the room; clings frantically to the teacher, who finds it almost impossible to conduct the regular class, because of the demands of Phyllis. All attempts to adjust her have so far failed. If a child runs toward her, she cries and declares they are going to hit her, though nothing of this sort has happened at school." "Though not so emotionally unstable as Phyllis, yet Philip is a very serious child. He can not be induced to play with the other children; just sits around and looks as though the burdens of the whole world were resting on his shoulders. He is shy and timid, but does not react so violently as Phyllis. The one thing that makes him cry is any allusion to his red hair, of which he seems to be dreadfully ashamed. The teacher finds it difficult to keep the other children from calling him red-head, which always precipitates a scene."

Case 272. H. twins, David J. Jr., and Catherine. They were born abroad of American parents in 1891. David had frequent temper tantrums in early childhood; later he was described as seclusive, self-opinionated, inclined to pick quarrels, always taking the opposite side in arguments. The father was in the diplomatic service, and the twins had excellent educational opportunities in Switzerland, France, and Holland, in private schools, and under tutors and governesses. David, however, made a poor record in his studies. Subsequently his vocational record was equally poor and he never made a sustained effort to be self-supporting. His quarrelsomeness was most marked with his mother. Gradually he developed a psychosis, around the age of 19 years,

the course of which was characterized by slow deterioration. At 25 he married a French governess, who died 2 years later, leaving a child. At about 30 he was hospitalized for brief periods in private institutions in England and in France, and on February 20, 1922, he was admitted to the Sheppard and Enoch Pratt Hospital at Towson, Maryland. At the time of this record—September, 1930—he was still a patient there. Throughout his residence he presented a picture of chronic schizophrenia with marked deterioration: untidy, drooling at the mouth, irrelevant in his answers, mumbling to himself with occasional outbursts of loud laughter; evidences of visual and somatic hallucinations. Catherine was described as brilliant intellectually, but undisciplined in childhood and adolescence, with history of petty thefts, cheating at school, and precocious sexual activity. She was strongly attached to her father, even after her marriage at 24, when she continued to spend most of her leisure time in reading to her father, walking and driving with him. This led to a gradual estrangement between her and her husband. They lived in a home supplied by her father; their two children were cared for by a nurse. Catherine showed jealousy toward her husband and the nurse. A subacute psychosis developed in the latter part of 1927, at the age of 36 years. She became overactive, bought useless articles, had terrors in the night, and finally, early in March, 1928, she had a panic, screamed out of the window, called the police, and was moved to the Sheppard and Enoch Pratt Hospital at Towson, Maryland. There she was for a time excited, restless, anxious about the family, expressed notions of purity and morality, wanted to be "an example to the children." In her utterances there was marked sexual and religious content with evidence of hallucinations. She showed rapid improvement, however, and on June 18, 1928, was paroled. The improvement continued while on parole and on August 3, 1928, she was discharged. The hospital diagnosis was schizophrenia.

Group 58. Child behavior difficulties, predelinquent types; normal intelligence; both affected. 1 case: No. 273.

Case 273. C. twins, Nellie and Robert. Born in Michigan, April 4, 1921. Observed by us in April, 1931, in a private boarding school for orphans in Los Angeles, California, where they had been placed following their mother's death, the father being unable to manage them properly. Mental tests made, in 1930 and 1929, respectively, revealed, for Nellie, I.Q. 77, for Robert, 109. Nellie has done poorly at school in her studies, has had to repeat both the first and second grades; otherwise she presents no problem. Robert has done well in his studies, but has presented a behavior difficulty from an early age. Before his mother died he stole constantly, but without penalty, as his mother made good his thefts and kept them from the father's knowledge. Robert is much interested in burglary, reads all he can find about it in the newspapers. Also, on one occasion, he tried to set fire to his father's house.

Group 59. Juvenile delinquency; normal intelligence; both affected. 1 case: No. 274.

Case 274. K. twins, Sherman and Margaret. Born in Baltimore, Maryland, January 3, 1921. Our observation in November, 1931, through the courtesy of the Juvenile Court of Baltimore. The twins are of normal intelligence; mental tests in 1931 revealed, for Sherman, I. Q. 98, for Margaret, 94. Mother had nephritis and convulsions before the twins were born; their birth was premature, at 7½ months; Sherman weighed but 4½ pounds, was born by breech presentation, was partly asphyxiated; Margaret's birth said to have been normal. "Sherman is led into most of his misbehavior by Margaret, and accepts blame for her in many things; he lies, steals, and has a record of sexual delinquency, including incest with Margaret; writes obscene letters." Has made normal progress in studies at school. Was in St. Mary's Industrial School, Baltimore, for about 6 weeks, later committed to Maryland State Training School (October, 1931), by the Juvenile Court, for burglary. At the time of our investigation of the case he was still an inmate there. Margaret is described as "sly and cunning; lies and steals, but is seldom caught; leads Sherman into thefts and lets him take the blame." She is an habitual truant. Has a history of homosexual attempts, masturbation, and incestuous relations with Sherman. In November, 1931, was committed to the Montrose School for Girls, following a charge of burglarious entry. The twins came from a clean, comfortable home; parents kindly and interested; but the twins have proved incorrigible.

Group 60. Adult criminality; normal intelligence; both affected. 2 cases: Nos. 275-276.

Case 275. F. twins, Sidney and Belle. Born in New York City, February 5, 1906. Sidney's case is one of imbecility which has been evident almost from the beginning. It has been attributed either to a cerebral birth trauma sustained in the course of the difficult and instrumental delivery, or to a fall from his baby carriage at the age of 4 months, in which he struck his head on the pavement. He did not walk until 3 years and did not talk until 6. He was sent to school at 10 years and put in an ungraded class, but was taken out after 2 or 3 days, as he was ill-treated by the other children. He was active in a troublesome and mischievous way, and difficult to care for at home. He was placed in the Children's Hospital and School, Randall's Island, New York, for brief periods at the ages of 12 and 18 years, and finally was committed for permanent care and custody to Letchworth Village at Thiells, New York, on May 6, 1927. At the time of our observation of the case, which was in November, 1932, he was still an inmate there. A mental test in 1927 revealed I. Q. 33. A recent case note states: "He goes out with a group of boys from the cottage, but will not do any work except under constant supervision." Belle developed behavior problems both at home and at school early in adolescence. She would make a disturbance in class, walk out of the room, and return at her convenience. This grew worse, and eventually

she became so troublesome that she had to be taken out of school, and for over 2 months she remained in the house continuously, refused to see anyone, would lock herself in her room, and spent most of the time, day and night, reading. Her father then placed her for observation in the Psychopathic Pavilion of Bellevue Hospital, where she stayed for 2 weeks in April, 1924. There she was classified as "a constitutional psychopathic with a mania, presumably narcissistic," but was not committed at that time. Immediately upon her release from Bellevue Hospital she disappeared from home and it was soon learned that she had joined a traveling burlesque show and married. She lived with her husband only 3 days, and later the parents had the marriage annulled, partly for the reason that she was a Jewess and her husband a Gentile. In April, 1926, she disappeared again and was located by the police within a few days "in one of the lowest of cabarets." Thereupon she was committed as "a wayward minor" to the Westfield State Farm at Bedford Hills, New York, on May 8, 1926. There she apparently settled down, and on March 21, 1927, she was allowed to go home on parole. She obtained a very good position and got along well for several months; but, in September, 1927, she disappeared again. It was reported to the parole officer that she had been seen in speakeasies, drinking, wearing expensive clothes, etc., and she was finally located in a night club in Mamaroneck, New York. She was then taken back to the Bedford Hills institution on May 2, 1928, seemed again to improve, and on December 14, 1928, was granted once more a parole at home. On February 2, 1929, she was again returned to the institution, as she had violated her parole by running around with a married man, etc. She was then observed to have definitely psychotic symptoms, "talked constantly, showed flight of ideas, walked the floor, and talked in a rambling manner most of the night," and was therefore committed to the state hospital for the criminal insane (Matteawan) at Beacon, New York, on June 1, 1929. The observations at the Matteawan State Hospital have been summarized as follows: "On admission here she was restless, overactive, facetious, irritable, appeared to be under considerable pressure of activity and showed flight of ideas. She commented freely on things seen and heard, denied hallucinations, was approximately oriented, and her memory appeared to be good as far as could be ascertained. Following her admission she continued restless, overactive, noisy, had to be placed in a room by herself, where she sang constantly, frequently pounded on the door, used violent and obscene language, was elated, seemed to be enjoying the situation thoroughly, and showed marked distractibility and flight of ideas. In October, 1929, she was noted as being somewhat quieter, and from that time on she improved steadily. On February 24, 1930, she was discharged as recovered." The hospital diagnosis was manic-depressive psychosis, manic type. Unlike her twin brother, Belle had good, even somewhat more than average intelligence. A Stanford-Binet test in 1928 revealed I. Q. 113.

Case 276. F. twins, Arthur and Lilly B. Born in East Boston, Massachusetts, March 24, 1889. Our observation in August, 1932, through the courtesy of the Social Service Department of the Metropolitan State Hospital, Waltham, Massachusetts. Arthur has been, for

many years, "in jail much of the time" by reason of alcoholism and disorderly conduct, resulting from this. Lilly is of markedly subnormal intelligence; has been, for years, given to constant masturbation, perverted sexual practices, soliciting children for sexual purposes; eventually developed hallucinations and other psychotic symptoms, and was committed, September 9, 1911, to Danvers State Hospital, where a diagnosis of "psychosis with mental deficiency" was established. She has since been transferred to Grafton and, later, Metropolitan State Hospital, and was still an inmate in the last-named institution at the time of our observation of the case.

Group 61. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; both affected. 13 cases: Nos. 277-289.

Case 277. J. twins, David George and Dorothy Ruth. Born in Oakland, California, December 20, 1922. Observed by us in one of the Oakland city schools in November, 1931. Mental tests in 1931 revealed, for David, I.Q. 79, for Dorothy, 88. David presents an annoying behavior problem. His outstanding characteristic seems to be cruelty. "Wherever he is, children are crying: he pinches, hits, trips, and sticks pins in them both in and out of school. He is also a coward, and whenever a child turns on him, he runs, crying, for safety. Always denies his actions, but will repeat the same thing 5 minutes later. It is the same with animals: he has been bitten twice quite badly by dogs which he was abusing. The teacher is keeping him seated in a part of the room away from other children. Dorothy presents no problem of any kind, except that she and David do not get along well, as she seems to be afraid of him; and except, of course, that arising from her slightly subnormal intelligence.

Case 278. R. twins, Leonard and Daisy. Born in Phoenix, Arizona, January 10, 1921. Our observation in May, 1931, in one of the Santa Monica, California, city schools. Leonard was the first-born of the twins, and weighed only 3 pounds. Daisy was born 3 hours later, and weighed 6 pounds. Daisy started to walk 6 months ahead of Leonard. She was always a healthy baby, and is even now larger and more robust than Leonard. They both had smallpox at 3 years, Leonard's was a severe case, Daisy's a very mild one. Leonard was a sickly boy during infancy and early childhood. They are also very unequal in intelligence. Mental tests made in 1928 and 1929, respectively, revealed, for Leonard, I. Q. 72, for Daisy, 89. Daisy has made good progress in studies, is industrious, and presents no behavior difficulty. Leonard has done poorly at school and is a behavior problem: "Never works if he can get out of it; often causes trouble in the classroom; on the playground is the coward-bully type; torments the smaller boys, but cries on the slightest provocation; is untruthful and quarrelsome."

Case 279. B. twins, Dorothy and Donald. Born in San Diego, California, in 1919. Our observation in December, 1931, through the courtesy of the San Diego Children's Home. These twins are of illegitimate birth; mother seems of subnormal intelligence, does not know

who their father is. There is no record of any mental tests in these cases, but they are obviously of subnormal intelligence, estimated as not higher than the dull normal level. Dorothy presents a marked behavior problem at school: "fusses over everything; does not want to do anything she is told to do; is not defiant, but fusses till she wears out the teacher's patience; at 12 years she is only in the fourth grade." Donald is markedly undersized; "looks pinched and weazened, like a little old man. He is extremely excitable; stutters badly; if anything the least bit out of the usual occurs, he goes all to pieces, laughs, jumps around, cries, tries to talk, becomes incoherent, and, after it is over, is utterly limp."

Case 280. M. twins, Lawrence B. and Florence. Born in Illinois, January 20, 1919. The home situation is unsatisfactory, the children are ill-fed, scolded and beaten. The early history of the twins is uncertain. Lawrence was admitted to the Lincoln State School and Colony, Illinois, March 28, 1927. On April 19, 1928, he was transferred to the Dixon State Hospital, Illinois; and at the time of our observation of the case, which was in June, 1932, he was still an inmate there. At the time of his admission he was averaging 12 seizures a year at irregular intervals. Under treatment these became less frequent, and since December, 1930, he has had none. A mental test in 1927 revealed I.Q. 75. There is no record of a mental test in Florence's case, but she is obviously of subnormal intelligence, estimated as on the level of high-grade moronism. At the age of 13 years she is but in the fourth grade and doing very poorly; her teachers have recommended placement in an institution. Florence has been free from epilepsy, but she presents a behavior difficulty: swears at her teacher, calls the other children foul names, eats worms, drinks ink, etc.

Case 281. M. twins, Ruth and Ruben. Born in Compton, California, September 30, 1918. Observed by us in February, 1932, in one of the Compton city schools. The mother of these twins is described as over-religious, tries to discipline them by telling them they won't go to heaven, forbids amusements; and they disobey her surreptitiously. Both twins are of subnormal intelligence. Mental tests in 1931 revealed, for Ruth, I.Q. 60; for Ruben, 53. Both are also doing poorly in their studies at school. Ruth, at $13\frac{1}{2}$ years, is in the low fifth grade; Ruben is in the "opportunity room," struggling with fourth-grade work. Ruth cries frequently, but presents no marked behavior problem. Ruben is very troublesome: "has a bad temper, swears on slightest provocation, picks on smaller and younger children, likes to kill animals; used an open knife in a scuffle with another boy; sneaks out in the evening to get a free admission to the movies; troublesome incidents at school are of almost daily occurrence." There are plans under way to commit him to an institution for the feeble-minded.

Case 282. J. twins, Rosie and James. Born in Portland, Idaho, July 30, 1918. The father deserted the family and they are supported by the county. One sister and one brother are in a detention home as juvenile delinquents. Both twins are of subnormal intelligence. Mental tests made in 1932 and 1926, respectively, revealed, for Rosie, I. Q. 62, for James, 83. Both have also done poorly in their studies

at school. Rosie stayed three terms in the low first grade, three terms in the high first grade, repeated the third grade, is now rated "D" in all her studies. James repeated the first and third grades, is in the "Z" (slow-moving) section, and rates "D" in work and effort. Both twins also present behavior difficulty, Rosie more markedly so. Rosie has had temper tantrums both at home and at school; "she is agreeable only when things go her way." She also has a record of truancy. "She is continually being hurt: arm cut; finger crushed; head bruised; hand cut; knee bruised, etc." "James also has a temper, is mostly sullen and stubborn; like his twin sister, he is continually being hurt."

Case 283. S. twins, Edna and Edwin. Born January 5, 1917. Mental tests in 1928 revealed, for Edna, I.Q. 77, for Edwin, 83. Both are also retarded at school: at the time of our investigation of the case, which was in May, 1931, Edna was in the fourth grade, and Edwin in the fifth. Edwin has presented no other problem, but in Edna's case there has been, in addition, a behavior difficulty, with a suggestion of possibly prepsychotic traits: she was whipped by her mother and ran away from home in the spring of 1929; upon her return, she suddenly became afraid that her mother was going to whip her again, so she ran away a second time and appealed to the police for protection. She was therefore placed in the Girls' Parental School in Seattle, Washington, on May 1, 1929, and at the time of our investigation, which was in 1931, was still an inmate there.

Case 284. M. twins, Sidney and Alice. Born in Los Angeles, California, May 5, 1915. Our observation in October, 1932, through the courtesy of the Welfare Center, Los Angeles city schools. Sidney is of slightly subnormal intelligence, I.Q. 80. He has been a behavior problem in all the four schools that he has attended, and has finally been assigned to the Welfare Center. Described as "unstable, can not concentrate, clown in class, a nuisance to anyone near by, continually disobedient, a disturbance in any class he attends." Also described as "dishonest, discourteous, overbearing, very loud, always fighting, insulting toward teachers." Alice is of normal intelligence, I.Q. 102; but in the past year she, too, has presented a behavior problem: "In 1931 she often cut classes, and this year she refuses to go to school altogether; mother does not know where and how she spends her time."

Case 285. R. twins, Louise and John. They are of Polynesian race, parents being native Hawaiians. Born in Santa Clara, California, February 10, 1912. Louise did poorly at school, could not get beyond the third grade. By reason of psychotic episodes, characterized by emotional outbursts and aggressive tendencies, she was committed to Agnews State Hospital, California, on January 12, 1928. She remained there only half a month and, as her excitement subsided, was returned to her home. Her spells of excitement recurred, however, and, on May 26, 1928, she was committed to the Sonoma State Home, California, as feeble-minded. From there, too, she was tried on parole twice, in 1928 and 1930, but each time had to be brought back to the institution, partly by reason of her excited episodes and partly because of a behavior difficulty (soliciting men on the street). At the time of our investigation of the case, which was in February, 1931, she was still an

inmate there: "Disturbed a great deal of the time; housed on disturbed ward." A mental test in 1931 revealed I. Q. 59. John has never caused trouble, was somewhat retarded at school, probably of dull-normal intelligence. No record of a mental test on him.

Case 286. H. twins, Catherine and David. Born in Allerton, Massachusetts, February 17, 1910. The father had a manic-depressive psychosis, manic type, and died in a state hospital. The mother is feeble-minded. An older sister of the twins is epileptic. The home is very poor and dirty. Both twins were placed in the Wrentham State School, Massachusetts, on February 8, 1921. David, however, was discharged on May 10, 1921, and has since been living with his mother and working in a grocery store. There is no record of a mental test in his case, but he is obviously of subnormal intelligence, judged to be on the borderline level. Catherine is more markedly feeble-minded. A mental test in 1931 revealed I. Q. 46. While at the Wrentham State School, she developed psychotic complications which increased in severity to such an extent that it became necessary to transfer her to the Boston State Hospital on May 29, 1931. At the time of our observation of the case, which was in August, 1932, she was still an inmate there. The official diagnosis is mental deficiency with psychosis. Recent case notes state: "During her excited periods she is noisy, has a wild appearance, shouts and screams and uses profane and obscene language. Strikes anyone near her. Breaks windows and furniture. Afterwards sits staring into space, hair disheveled, immobile. In her disturbed periods it takes several people to restrain her from doing injury to herself and others. Thinks people are talking about her. Stutters, except when excited."

Case 287. L. twins, Joseph and Margaret. Born in Boston, Massachusetts, June 10, 1909. The mother is said to have had some mental trouble. Joseph has had *grand-mal* seizures at the rate of two or three a year since the age of 6 years. He has done poorly at school and advanced but as far as the fifth grade. There is no record of a mental test, but he is obviously feeble-minded, probably in the degree of high-grade moronism. He runs errands and does odd jobs for his father, who has a cobbler's shop. At the time of our observation of the case, which was in August, 1932, he had not been institutionalized. Margaret did somewhat better at school, finished eighth grade at 17 years; judged to have been of dull-normal intelligence. She had scarlet fever at 14 years and, around 16 years, began to show a definite personality change. She became quiet, seclusive, sensitive, worrisome, depressed. After school she went to work as a factory hand, but could not hold any job for more than a short time. Psychotic symptoms developed suddenly in the early part of July, 1929. She became restless, talked in a rambling way, imagined she was pregnant, cried a great deal. On August 20, 1929, she was committed to the Worcester State Hospital, Massachusetts, and on December 19, 1930, she was transferred to the Metropolitan State Hospital at Waltham, Massachusetts. At the time of our observation of the case, which was in August, 1932, she was still an inmate there. Upon her admission to the Worcester hospital, she was restless, cried a great deal, said God had sent a certain fellow to have

sexual relations with her. A case note in May, 1932, states: "Periodic spells of confusion and disturbance; unusually indolent and apathetic; incoherent and irrelevant; untidy; manneristic." The hospital diagnosis is dementia praecox. She has never had any manifestations of epilepsy.

Case 288. S. twins, Earl and Florence. Born in Newmarket, Ontario, Canada, October 8, 1888. Earl had very little schooling, did not advance beyond the second grade. There is no record of a mental test, but he is obviously of subnormal intelligence, estimated as in the degree of moronism. He was a laborer, doing odd jobs. In June, 1916, he enlisted in the army, but proved to be unsatisfactory and was discharged in December, 1916. While in the army he heard voices, but stated that they did not bother him much. Later got a job in a casket factory, lost it after 4 months, but then continued to hang around the plant, would not leave, and the police had to be called. After a brief term in jail, he wandered from one town to another, never could hold a job longer than a few days; finally, on September 9, 1925, he was committed to the Elgin, Illinois, State Hospital. At the time of our observation of the case, which was in June, 1932, he was still an inmate there. Recent case notes describe him as untidy in appearance, dull, apathetic, smiling to himself; runs and hides when he sees children, saying they are after him. The hospital diagnosis is dementia praecox, hebephrenic type. Florence has never been in an institution, but is obviously handicapped both intellectually and temperamentally. There is no record of a mental test, but she is judged to be not above the level of borderline intelligence. She was found living in the basement of an apartment house in a poor section of the city; very slatternly in appearance, coarse and vulgar in her language. Scrubs floors and cleans windows when she can get work, and thus has to support not only herself but also her husband, as he is not working. Complains a great deal and blames everybody she can think of for both her brother's and her own hard luck. Judged to be an inadequate and paranoid personality.

Case 289. S. twins, Charles A. and Lucy. Born in Holbrook, Massachusetts, June 16, 1888. Our observation in August, 1932, through the courtesy of Metropolitan State Hospital, Waltham, Massachusetts. One paternal uncle of the twins was insane. The twins were born prematurely, 1 month before term. Charles was a sickly child, slow in learning to walk and talk. In childhood had frequent temper tantrums, when he would throw dishes about and tear his clothes. Has always been of irritable and quarrelsome temperament; poor mixer, kept to himself. Worked as shoe cutter, but was often out of a job. Obviously of subnormal intelligence. In the thirties he gradually developed psychotic symptoms, became depressed, thought people were following him, threatened to kill himself; later said he was the highest official in the United States, tried to direct street traffic, got arrested for this, and was finally committed to the Taunton, Massachusetts, State Hospital, on January 21, 1925. In 1930 he was transferred to the Metropolitan State Hospital; and at the time of our observation of the case he was still an inmate there. The official diagnosis is

dementia praecox. Lucy is of obviously subnormal intelligence; also untidy, shiftless, generally inadequate; but has never required institutionalization.

Group 62. Child behavior difficulties, predelinquent types; subnormal intelligence; both affected. 8 cases: Nos. 290-297.

Case 290. C. twins, Alvin and Maxine. Born in San Diego, California, July 10, 1923. Observed by us in November, 1931, in one of the Long Beach, California, city schools. Alvin is of subnormal intelligence, I. Q. 81. Maxine's I. Q. is 93. "A few weeks ago the twins were caught initiating a group of 10 or 12 children into various sexual practices. Investigation revealed that this had been going on for some time. The court records show that on October 7, 1929, the father was jailed for fornication. Previously he had been on probation for contributing to the delinquency of a minor; he is now serving a penitentiary sentence. The family (wife and 6 children) are being supported by the Social Welfare League."

Case 291. B. twins, Phillip and Phyllis. Born in the Philippine Islands, of American parents, on May 4, 1920. Our observation in April, 1931, through the courtesy of the Department of Research, San Francisco, California, city schools. Phyllis is of slightly subnormal intelligence, I. Q. 89; but presents no behavior problem. Phillip, though of normal intelligence (I. Q. 105) is unadjusted educationally, has to be in an ungraded class, on account of a marked behavior difficulty: "he is afraid of fire, jumps at a quick sound, is afraid of fire engines; is a very restless sleeper; troublesome and disobedient in class; some trouble on account of truancy; at home is morbidly attached to his mother, and at the same time very jealous of his twin sister."

Case 292. V. twins, William and Evelyn. Born in Oakland, California, February 24, 1920. Our observation in April, 1931, through the courtesy of the Los Angeles, California, Child Guidance Clinic. Stanford-Binet tests revealed, for William, I. Q. 94, for Evelyn, 89. Evelyn, besides being of slightly subnormal intelligence, was referred to the Clinic, in 1927, on account of "nervousness, disobedience, has difficulty in learning; scatter-brained; acts without careful thinking." William was referred in 1930, for a somewhat more serious behavior problem: disobedience, fighting, stealing. Twins were brought up together and both seem to have received from their parents inconsistent, inadequate, and inappropriate discipline.

Case 293. T. twins, Aurora and Edward. Born in Oakland, California, February 13, 1918. Observed by us, through the courtesy of the Institute of Child Welfare at Berkeley, California, in March, 1932. Their father is serving a sentence in San Quentin Prison, California. Both twins are of subnormal intelligence. Mental tests made in 1929 and 1930, respectively, revealed, for Aurora, I. Q. 77, for Edward, 72. Both are also retarded at school, Aurora by 2 years, and Edward by 3. Edward presents no other problem, but Aurora presents a behavior difficulty consisting of stealing and lying.

Case 294. M. twins, Leo and Leola. Born in Willows, California, July 22, 1917. Our observation in September, 1931, through the courtesy of the Social Welfare League of Long Beach, California. Father is in the Navy; deserted the mother when the twins were very young, because of her sexual promiscuity. The mother has since had an illegitimate child; has been under treatment for syphilis; her boarding house in San Diego has been closed by the police as a brothel. On a later occasion the family were evicted by their landlord on account of mother's entertaining sailors. In 1930 Long Beach police vice squad learned mother had been staging wild parties and had recently been put out of a dance hall on the Pike on account of being drunk and disorderly. Leola is of slightly subnormal intelligence, I. Q. 88. Leo's I. Q. is 102. Both twins have presented behavior problems since the age of 5 or 6 years. In 1923 Leo was found abusing Leola sexually, using a button hook until she bled. The twins were then taken from their mother and placed in a boarding home. After about 10 months the boarding home refused to keep them longer on account of their sexual practices; they were then placed in separate boarding homes. Difficulties, however, continued. Leola was boisterous and rough in manner, domineering toward other children. Leo was in constant trouble: "immoral practices with other boys," using bad language, writing obscene words on porches, walls, sidewalks; stealing pencils, milk bottles; being frequently tardy, often playing hookey. Finally, in August, 1931, both twins were brought to the attention of the Juvenile Court on account of "indecent conduct and truancy," and were made wards of the court.

Case 295. G. twins, Floy and Coy. Born in Sweetwater, Oklahoma, January 12, 1914. The mother died when the twins were young and the father is a disabled war veteran, an inmate of the Soldiers' Home at Sawtelle, California. The twins have been practically without a home and without supervision. Floy is of subnormal intelligence; a mental test in 1930 revealed I. Q. 73. Coy's intelligence is normal; a mental test in 1929 revealed I. Q. 93. Although both have been before Juvenile Court repeatedly, their cases are not classified as juvenile delinquency, as they were referred mainly on account of lack of proper guardianship. They both played hookey from school, and Coy was also a runaway. Floy was eventually committed to Sonoma State Home (for the feeble-minded) on December 10, 1930; and at the time of our investigation of the case, which was in April, 1931, she was still an inmate there.

Case 296. W. twins, Edward and Martha. Born in Crockett, California, December 26, 1913. Both are of subnormal intelligence. Mental tests made in 1931 and 1930, respectively, revealed, for Edward, I. Q. 67, for Martha, 59. There are several other children in the family, all of whom are bright and present no behavior problem. Edward is well behaved, has worked since the age of 9 years after school hours as a helper in a butcher shop. Martha has never wanted to go to school, used to run away; talked nothing but neologisms up to the age of 4 years, and still has a marked speech impediment. Just before menstrual periods she becomes restless and attempts to leave home. She became quite unmanageable, and, on August 10, 1926, she

was committed to Sonoma State Home (for the feeble-minded), California. On August 19, 1927, she was granted parole and almost immediately contracted a gonorrheal infection. She was therefore returned to the institution on October 20, 1927, and was sterilized. Since then she has been given two more trials on parole, but could not get along outside and had to be returned. At the time of our observation of the case, which was in February, 1931, she was still an inmate there.

Case 297. C. twins, Marguerite and Braggie. Negroes. Born in Los Angeles, California, July 22, 1916. Observed by us in April, 1931, through the courtesy of the Department of Psychology and Research, Los Angeles city schools. Both are of subnormal intelligence. Mental tests in 1930 revealed, for Marguerite, I. Q. 66, for Braggie, 82. Both are retarded in studies, Marguerite more so than Braggie. Marguerite has been reported repeatedly for stealing money and clothing at school. Although apprehended in the act, with the missing things found in her locker, she has denied the charges.

Group 63. Juvenile delinquency; subnormal intelligence; both affected. 12 cases: Nos. 298-309.

Case 298. C. twins, Jack and Grace. Born in Brunswick, Ontario, Canada, March 15, 1919. Our observation in August, 1932, through the courtesy of the Ontario Bureau of Mental Hygiene, Toronto, Canada. Both twins are of somewhat subnormal intelligence. Stanford-Binet tests, made in 1930, revealed, for Jack, I. Q. 85, for Grace, 82. Their mother has a bad reputation; does not pay bills; resents any interest in her children by authorities. Jack is described as "oscillating, variable in moods, vain and slovenly, suspicious of everyone; has record of many petty thefts; an incipient criminal." In June, 1929, he was brought before the Juvenile Court for theft of a bicycle and attempt to sell it. Was committed to Bowmanville School for Delinquent Boys for supervision and training until 21. At the time of our investigation of the case he was still an inmate there. Grace is failing in school; a frequent truant; described as "restless and impudent"; no Juvenile Court record.

Case 299. H. twins, Stanley and Phyllis. Born in Todmorden, Ontario, Canada, March 8, 1918. The mother is obviously feeble-minded; the home is dirty. Both twins have enuresis. Stanley has had to repeat several grades at school; a mental test in 1927 revealed I. Q. 79. He also stammers badly. Since the age of 12 years he has become a sex delinquent and was eventually expelled from school for initiating another boy into homosexual practices. Finally, on January 2, 1931, he was committed to the Reform School at Beamsville, Ontario. At the time of our investigation of the case, which was in August, 1932, he was still an inmate there. Phyllis is somewhat more intelligent; a mental test in 1927 revealed I. Q. 87; has done better in her studies at school; is said to have had chorea and is a bed-wetter; otherwise she has presented no problems.

Case 300. D. twins, Michael and Mary. Born in Pennsylvania, March 2, 1916. Parents were separated in 1917. Father was a heavy

drinker and brutal to the family. Mother negligent, wasteful, probably feeble-minded. Michael is of subnormal intelligence; a mental test in 1931 revealed I. Q. 76. He was first brought into Juvenile Court at the age of 13 years for destroying property, and, in October, 1929, was placed in the Cleveland, Ohio, Farm School, where he remained until October, 1930. Since then he has been before Juvenile Court on four occasions for stealing, destructiveness, and with a bad record of truancy. Finally, on May 22, 1931, he was committed to the Boys' Industrial School at Lancaster, Ohio. At the time of our investigation of the case, which was in August, 1932, he was still an inmate there. There is no record of a mental test in Mary's case, and we have had no opportunity of observing her. In Michael's social history it is stated that in 1929 Mary was placed in the Blossom Hill Home for Girls, Ohio (a private Catholic home for delinquent girls), as "an incorrigible." She was later removed to some convent, but where and why could not be ascertained.

Case 301. E. twins, Alberta and Albert. Born in Toronto, Ontario, Canada, February 21, 1917. Alberta has a poor school record, was twice expelled "for incorrigibility and bad influence on other girls"; she is also of subnormal intelligence; a mental test in 1929 revealed I. Q. 78. She has been a sex delinquent almost from childhood. On January 12, 1931, she was placed in the House of Industry, Toronto, and was discharged on January 11, 1932. She got into various troubles again almost immediately, and on July 6, 1932, was committed to the Alexandria Reform School for Girls, Toronto. At the time of our observation of the case, which was in August, 1932, she was still an inmate there. Upon admission there she was found to be infected with both gonorrhea and syphilis. She is very flippant and blasé, has loud manner, not ashamed of her sexual promiscuity; says all girls do the same, only some are more secretive; has scorn for girls without sexual experience; not interested in working; aggressive and headstrong. Albert is less troublesome; but he, too, is both feeble-minded and delinquent. A mental test in 1929 revealed I. Q. 66. On July 6, 1931, he was brought into Juvenile Court for stealing a purse out of a car. Because of bad home background he was committed to the Ontario Hospital at Orillia. At the time of our observation of the case he was still an inmate there.

Case 302. McN. twins, Jane and John. Born in Cobalt, Ontario, Canada, September 6, 1916. Home conditions are said to be unsatisfactory. Jane has been running the streets and has been known to the Juvenile Court as a sex delinquent since the age of 13 years. On April 21, 1931, she was committed to the House of Industry, Toronto, because of "lewd and licentious behavior." At the time of our observation of the case, which was in August, 1932, she was still an inmate there. A mental test in 1930 revealed I. Q. 76. John is somewhat more intelligent; mental test in 1927 revealed I. Q. 87. But he, too, has been troublesome on account of delinquency. At school he was a behavior problem and a truant. In April, 1930, he, together with another boy, broke into and robbed a grocery store of both money and goods. On May 16, 1930, he was committed to the House of Industry,

Toronto. At the time of our observation of the case he was still an inmate there.

Case 303. F. twins, Catherine and Lawrence. Born in Harrisburg, Pennsylvania, December 18, 1915. Mother described as erratic, garrulous, inadequate, probably of subnormal intelligence; constantly demands to be relieved of the burden of taking care of the twins, as she is unable to manage them. An older brother (or half brother) of the twins, born out of wedlock, was at one time in a reform school in Pennsylvania. The home is filthy, "an impossible place for the children." Catherine did poorly at school; reached but the sixth grade at 17 years. A mental test in 1932 revealed I. Q. 72. She was expelled from school in Chattanooga, Tennessee, for stealing a watch. Later, in Los Angeles, California, she stole a purse at school in 1931 and was placed in the Rowan Welfare School (a special school for problem children). In October, 1932, the mother filed a complaint against Catherine and brought her before the Juvenile Court for disobedience, staying out nights, irregular school attendance, attempting sexual intercourse with her 9-year-old brother, etc. Catherine was eventually referred to the Catholic Welfare Bureau for placement in a foster home. Lawrence has also been in trouble. A mental test in his case, too, revealed I. Q. 72. In February, 1933, at the time of our investigation of the case, he was under arrest on a charge of burglary.

Case 304. T. twins, Lena and Jake. Born in St. Joseph, Missouri, November 22, 1915. At the time of our observation of the case, which was in October, 1932, Lena was put in an ungraded room in the Norfolk Development School, Los Angeles, California; I. Q. 70. She is quiet, docile, causes no trouble, good helper at home. Jake is more intelligent; a mental test in 1929 revealed I. Q. 87. He is emotionally unstable, cries readily, has violent temper outbursts. His delinquency episode occurred in October, 1930, when he and another boy forced a 2½-year-old boy to use his mouth on their genitals. After two weeks in Juvenile Hall, Los Angeles, he was granted probation.

Case 305. V. twins, Florence and James. Born in Kamloops, British Columbia, Canada, November 6, 1914. Both twins are of subnormal intelligence, but Florence much more markedly so. Mental tests made in 1930 and 1926, respectively, revealed, for Florence, I. Q. 58, for James, 81. Florence has been, in addition, a sex delinquent. She stayed out nights, her father gave her a beating, later, in 1928, brought her before the Juvenile Court. She spent much time in the Hindu district in New Westminster, British Columbia, and was said to be intimate with Hindus and Chinese. She was tried on probation but there was no improvement, and on July 27, 1929, she was committed to the Girls' Industrial School at Vancouver. At the time of our investigation of the case, which was in May, 1931, she was still an inmate there. James did rather poorly at school, reached but the seventh grade, but otherwise has presented no problem.

Case 306. L. twins, Abel and Esther. Born in Santa Barbara, California, October 15, 1914. Both twins are of subnormal intel

ligence. In Abel's case a mental test in 1930 revealed I. Q. 64. In Esther's case there is no record of a mental test; she was in the seventh grade at 16 years, and on the basis of her educational achievement her I. Q. is estimated at about 80. However, she has presented no problem otherwise. Abel did very poorly at school, soon began to dislike school, and has many times asked his parents to allow him to quit school. At the age of 12 years he fell in with bad companions, leaving home repeatedly. In 1927, he, in company with another boy who had had a reform school record, stole an automobile, but the charge was not pressed at that time. He continued to run around with bad companions, and in May, 1929, he and two other boys burglarized a storehouse in Ojai, California. Abel was then given another chance. In November, 1929, he ran away again, went to San Pedro, California, intending to enlist in the Navy. He was brought back, and on November 29, 1929, was committed to Whittier State School, California. At the time of our investigation of the case, which was in January, 1931, he was still an inmate there, getting along quite satisfactorily and adjusting well to the institutional environment.

Case 307. B. twins, Melbourne and Melba. Born in California, November 15, 1913. Both were retarded at school, and both are of subnormal intelligence. Mental tests made in 1929 and 1926, respectively, revealed, for Melbourne, I. Q. 74, for Melba, 66. Only Melbourne has a record of delinquency, and this consisted of a single episode of sexual relations with a 10-year-old girl (statutory rape) when he was 15 years of age. For this he was brought before the Juvenile Court in Los Angeles on April 11, 1929, and released on probation on April 22, 1929. At the time of our observation of the case, which was in July, 1931, the twins were living at home and causing no trouble. Melbourne was working as an auto mechanic's helper, and Melba was helping her mother with the housework.

Case 308. P. twins, Harry and Rose. Born in Stockton, California, January 12, 1912. Both are of somewhat subnormal intelligence and both are mildly delinquent. Harry has been a persistent truant from school and was picked up by truant officers several times. In December, 1928, he and two other boys had been given several drinks of wine by the father of one of the boys. Then the three boys climbed over the fence of an automobile wrecking company and were helping themselves to automobile parts when they were discovered and arrested. On April 30, 1929, Harry was committed to Preston School of Industry at Ione, California. A mental test in 1929 revealed I. Q. 74. He remained at the Preston School until June 14, 1930, when he was granted a parole. At the time of our observation of the case, which was in April, 1931, he was still on parole, getting along fairly well, working at odd jobs. Rose is somewhat more intelligent; a mental test in 1926 revealed I. Q. 84. She, too, would not go to school, lied about her age, and, on May 13, 1926, was committed to Ventura School for Girls, California, because she had "no parents or guardian capable of exercising proper parental control." The institution record states that "she lacks moral sense and has not had sufficient discipline." However, she was released by court order on August 1, 1926.

Case 309. E. twins, Clarence Ernest and Clara. Born in Goderich, Ontario, Canada, June 1, 1912. Clarence's case represents a combination of mental deficiency, mild epilepsy, and behavior difficulty from early childhood, culminating in juvenile delinquency. He has always been disobedient, hard to manage, truant from school and home. He proved to be unteachable and can barely write his own name. He has always been in trouble for theft and destruction of property, considered "a menace to the public and especially to young girls." He was in the Bowmanville Reformatory, Ontario, from July 16 to October 16, 1923, for stealing a horse and buggy; again from April 27, 1925, to April 27, 1926, for stealing a bicycle; in the Goderich jail, Ontario, from July 9, 1929, to February 10, 1930, for an offense against a young girl; and was finally committed to the Ontario Hospital at London on July 23, 1930. At the time of our investigation of the case, which was in September, 1932, he was still an inmate there. A mental test in 1931 revealed I. Q. 44. About once a month he has spells when he loses consciousness and afterwards has no knowledge or recollection of what happened. Clara had never been institutionalized, but, according to the case history, she had epilepsy and died of it at the age of 14 years.

Group 64. Adult criminality; subnormal intelligence; both affected. 1 case: No. 310.

Case 310. B. twins, Dorida and Edward. Born in Canada, May 15, 1909. The maternal grandfather was sentenced to the Massachusetts State Prison in 1922 for incestuous relations with his granddaughter (Dorida); he gave her a venereal infection. The mother is of subnormal intelligence and has a police record for fornication. The father also served a term, in Norfolk jail, for sexual offenses. He, too, committed incest with Dorida and caused her first illegitimate pregnancy. Dorida was first arrested on July 29, 1925, as a wayward child and sent to the House of the Good Shepherd for 1 year. On October 8, 1931, she was convicted of fornication and sentenced to the Reformatory for Women at Framingham, Massachusetts. At the time of our investigation of the case, which was in August, 1932, she was still an inmate there. She has three illegitimate children; is not sure who the fathers are, as she had been with as many as twelve men in one night. Her first child showed evidences of venereal infection since early infancy with eyes, ears, nose, and fingers discharging pus. A mental test of Dorida in 1931 revealed I. Q. 65. Edward has presented a problem of alcoholism since his adolescence. He has a record of five arrests for drunkenness from 1925 to 1928 with probation, fines, and imprisonments in the House of Correction, Massachusetts. He married, but failed to support his family, and on June 5, 1930, was arrested for nonsupport of family; was placed on probation and ordered to pay \$2 weekly. There is no record of a mental test in his case, but he is obviously of subnormal intelligence.

Group 65. Child behavior difficulties, preneurotic and prepsychotic types; normal intelligence; male alone affected. 6 cases: Nos. 311-316.

Case 311. W. twins, Loren and Lorena. Born in Huntington Beach, California, November 4, 1921. Our observation in December, 1931, in one of the Huntington Beach city schools. Both twins are of more than average intelligence; mental tests in 1930 revealed, for Loren, I. Q. 121, for Lorena, 114. "Almost every day Loren is brought into the office because of his bad conduct on the playground. He quarrels with all the children and hits hard, frequently hurting children in this way. In the classroom he is very lazy, and indifferent to anything the teacher says to him; he sits and dreams there; but when he is out with other children, he is constantly fighting. Despite having the higher I. Q., he is a whole year behind his twin sister at school. His parents also report their inability to make him act differently." "Lorena is just a nice average girl; she does her work well at school; presents no behavior difficulty."

Case 312. M. twins, Robert and Lois Elizabeth. Born in Long Beach, California, May 2, 1920. Our observation in October, 1931, in one of the Long Beach city schools. A paternal uncle of the twins, in a fit of depression, committed suicide. Both twins have above-average intelligence; mental tests revealed, for Robert, I. Q. 119, for Lois, 112. The next-door neighbors refer to Robert as "that little red devil." His teacher describes him as "explosive"; he states, further, "You never know when some casual remark in the lesson or some other trifling incident will send Bob off into a violent temper tantrum or an equally violent outburst of hilarity, regardless of the appropriateness of the occasion. If he trips over a chair or desk, he turns on it and tries to smash it regardless of how he skins his knuckles in the process. On at least one occasion he beat against some inanimate object that was in his way until he dropped unconscious. When not in a tantrum, he is a most bright, attractive, likeable lad, full of fun, with a keen sense of humor, and kind, especially to pets." Betty's teacher says, "She is about a perfect child; sweet disposition, meticulously neat, accurate in her work." The next-door neighbors say the same.

Case 313. S. twins, Harry and Mary. Born in Long Beach, California, in 1919. Our observation in November, 1931, in one of the Long Beach city schools. The twins are of normal intelligence; mental tests in 1930 revealed, for Harry, I. Q. 103, for Mary, 97. "Mary is very cooperative and dependable; a very pretty child with charming manners. Her achievement in school is superior, better than her I. Q. would indicate, although it is in her oral rather than written work that she excels. Has fine social qualities." "Harry has an antagonistic attitude toward all authority; has temper tantrums when not allowed to have his way. Although he has the higher I. Q., he is one grade behind his twin sister at school and does very poor work in that. Seems to dislike her greatly, resents her superiority. Untruthfulness is an outstanding trait of his, much of it apparently without

rhyme or reason." The parents of these twins are religious fanatics, street-corner evangelists, and will not recognize that Harry presents a problem. They insist he is "a perfect angel" and blame the school for any difficulty. He is their favorite, and "is already trying his hand at evangelism." Mary is indifferent to it, and is not approved of by the parents for her gaiety and pleasure-loving disposition.

Case 314. A. twins, John and Mary Jane. Born in Oakland, California, February 14, 1918. Observed by us in April, 1931, through the courtesy of the Department of Psychology and Research, Los Angeles, California, city schools. Mental tests in 1928 revealed, for John, I. Q. 102, for Mary, 110. The slight behavior difficulty in John's case seems to be due entirely to his mother's nagging. At school there is no complaint of him. Mother says she knows he is brilliant and is not getting the results that he should. Says also, "He doesn't mind at home; I have to remind him continuously to brush his teeth, etc." The mother holds up Mary as an example to John, praises her and encourages her to tell tales on John. Mary, on her part, "watches John like a hawk" and reports to mother everything he does. She is notably her mother's favorite. John, on the other hand, is jealous of Mary and, to protect himself, is unresponsive and unreliable.

Case 315. McC. twins, John and Margaret. Born in New York City, April 10, 1916. Our investigation in July, 1931, through the courtesy of the Institute for Child Guidance, New York. Stanford-Binet tests in 1930 revealed, for John, I.Q. 99, for Margaret, 108. There has been a marked contrast between the twins from the beginning. John did not sit up until 16 months, did not walk until 2 years; at school he failed of promotion three times, his main difficulty being with arithmetic and spelling. Margaret walked at 9 months; makes high grades at school, has skipped two grades. She is a good-looking, well-poised, popular girl, presenting no behavior problem. John, in addition to the early difficulties already mentioned, developed a behavior problem which seems to have become aggravated since his two attacks of chorea, the one in 1925, the other in 1928. He is described as "very destructive, knocks over everything, breaks furniture, uses vile language, tries to hurt smaller children; has constant trouble at school; stubborn, moody, sullen." Most of these traits seem to come out in spells or attacks.

Case 316. R. twins, Richard and Beatrice. Born in Los Angeles, California, September 14, 1914. These are perfectly normal youngsters, investigated by us in February, 1933, through the courtesy of the Juvenile Court of Los Angeles. The slight episode of so-called delinquency which had brought Richard into court in December, 1931, consisted of his driving an automobile, without a license, at a rate of 50 miles per hour in a 45-mile zone. The case was dismissed when it was shown that he was trying to reach home at a time specified by his mother.

Group 66. Child behavior difficulties, preneurotic and prepsychotic types; normal intelligence; female alone affected. 5 cases: Nos. 317-321.

Case 317. R. twins, Ora and Loren. Born near San Diego, California, in 1921. Our observation in December, 1931, through the courtesy of the San Diego County Health Department. These twins are apparently of normal intelligence, although there are no records of mental tests. Loren presents no difficulty of any kind at home or at school. Ora, however, seems to be underweight and of delicate health physically and, at the same time, peculiarly lacking in emotional control: "Frequently has uncontrolled fits of laughing and crying; has had to be carried out of picture shows because of this; also has to be sent home from school about twice a week for the same reason." In addition, she stutters very badly, blushes easily, is a very poor sleeper, eats poorly.

Case 318. W. twins, Jane and Wayne. Born in Long Beach, California, December 21, 1919. Our observation in November, 1931, in one of the Long Beach city schools. Jane is a girl of high average intelligence, I. Q. 119; Wayne's I. Q. is 108. Wayne is an average student, a good mixer, of cheerful temperament, without any behavior problem. Jane has been of markedly schizoid temperament almost from birth. Even as a small child she would hide whenever company came. She has always been in good health, except that she faints at the sight of blood. Her excessively shy disposition is in sharp contrast with her parents and her twin brother. "She does very superior written work at school, is painfully conscientious, cries easily and often, is very sensitive. She doesn't approve of her twin brother and his boisterous, careless ways. She has no playmates, but is an inveterate reader. All attempts to get her to participate in school activities have failed."

Case 319. V. twins, Margaret and Francis Edwin. Born in Los Angeles, California, September 18, 1915. Our observation, by private reference, in February, 1931. Francis is a normal boy in every way, is in the third year in high school. In Margaret's case difficulty began at birth; for some unstated reason her delivery was more difficult than Francis', and was instrumental. At 9 months she had a convulsion and has been epileptic ever since, with seizures occurring at weekly intervals, sometimes in series of two or three. Her behavior problem is essentially based on an ungovernable temper. She is described as obstinate; "flies into a rage when told to obey; has destroyed furniture and clothing in a fit of rage." This difficulty became so pronounced that she could no longer be cared for outside of an institution, and was therefore committed to Sonoma State Home, California, on January 1, 1928, and was still there at the time of our investigation of the case. A Stanford-Binet test in 1928 revealed I. Q. 97.

Case 320. S. twins, Kathryn and Ralph. Part Indian. Born in Moapa, Nevada (Piute Reservation), in 1914. Our observation in December, 1931, in the Indian School at Arlington, California. These

twins are of normal intelligence; mental tests, in 1930 and 1929, respectively, revealed, for Kathryn, I. Q. 99, for Ralph, 108. Ralph is described as "a nice-looking, pleasant boy, the brightest in the Indian School, always cooperative." Kathryn is in frequent conflict with the school authorities. As an Indian chief's daughter she refuses to be bound by the rules of the school; has to be watched carefully, as she will leave the premises whenever she feels like it, and fights viciously when they attempt to restrain her. She will not do her room work, or obey other rules unless she feels like it. Of late she has grown very sullen, uncommunicative, and says she is going to leave the school for good. In the school work she is very good and likes to read, chiefly wild-west stories.

Case 321. G. twins, Beatrice and Roy. Born in Dayton, Ohio, July 28, 1911. Our investigation in October, 1931, through the courtesy of the Department of Public Welfare, Columbus, Ohio. Roy has had a common-school education, later joined the Marines, rendered most satisfactory service, has never presented any problem at home, at school, or at his work. Beatrice has been a difficult child from an early age. She was adopted into a very fine home at the age of 5 years. There was increasing difficulty both at home and at school. Despite a normal intelligence (I. Q. 97) she did rather poorly at school; seemed unable to concentrate; had to repeat the eighth grade. Thereafter was given private tutoring, but did no better. In November, 1925, she was placed for observation in the Psychopathic Institute of the Jewish Hospital in Cincinnati, Ohio, being referred on account of "contrariness, annoyance to others, always troublesome and difficult to live with, selfish, destructive, mean, disrespectful, given to lying," etc. The diagnosis eventually arrived at was "psychopathic personality with psychosis," leading to commitment, on February 5, 1927, to Longview Hospital, Cincinnati, Ohio.

Group 67. Child behavior difficulties, predelinquent types; normal intelligence; male alone affected. 2 cases: Nos. 322-323.

Case 322. M. twins, Curtis James and Theresa. Born in San Diego, California, in 1921. Our observation in December, 1931 through the courtesy of the County School Nurse at Spring Valley, California. The father of these twins is a sailor and does not provide well for his family; sometimes they do not hear from him for months at a time. Curtis has been caught stealing several times; usually it is candy or toys from stores; also at times things from the other children at school: "He is a bright, likeable child, popular with his classmates, and would not steal if he could have more of these things in his home." "Theresa is a nice, clean, intelligent child who is well adjusted and causes no trouble."

Case 323. C. twins, Robert and Olive. Born in Cincinnati, Ohio, January 29, 1918. Robert is of mediocre intelligence, I. Q. 92. "He has been a behavior problem for years, both at home and at school, and was referred for diagnosis to the Psychopathic Institute of the Jewish Hospital in Cincinnati, where he was under observation for about 7

weeks in 1928." The main complaints were troublesome behavior at school, petty theft, and inability on the part of his mother to control him: "The father is dead, and Robert knew that he had his mother bluffed, and took advantage of that fact." At the Institute he was noted as being "of violent temper, dishonest, unreliable, emotionally unstable, lacking in self-control, and showing a great deal of sex curiosity." In Olive's case there is no record of a mental test; but she has made good progress in her studies at school, and has presented no behavior difficulty either at home, or at school, or elsewhere.

Group 68. Child behavior difficulties, predelinquent types; normal intelligence; female alone affected. 1 case: No. 324.

Case 324. M. twins, Mildred and Milton. Born in California, November 14, 1914. Observed by us in December, 1931, in one of the high schools at Redlands, California. Intelligence tests, in 1930, revealed, for Mildred, I. Q. 98, for Milton, 97. "Milton slides along in his work, does not seem to have ambitions or ideals; but he has never been a problem, and his merit record is normal." Mildred is considered a bad influence in the school: "She does nothing in her work; is loud, vulgar, and boy-crazy with no inhibitions; has been sent to the office several times for writing notes of a smutty character to boys; frequently ditches classes; is on the streets at all hours of the night."

Group 69. Juvenile delinquency; normal intelligence; male alone affected. 18 cases: Nos. 325-342.

Case 325. G. twins, Vernon and Verna. Born in Tacoma, Washington, January 25, 1917. Our observation in September, 1932, through the courtesy of the Probation Department of Los Angeles County, California. The twins had always been regarded as fine children, causing no trouble. Vernon has an I. Q. of 107 and, at 15 years, is in the ninth grade. The only difficulty was that with Vernon, in October, 1931, when he was brought before the Juvenile Court on charges of six counts of burglary and possession of a revolver. He was released on probation until the age of 21 years, and made restitution of stolen articles. Subsequent reports have been to the effect that he was making good on probation.

Case 326. McC. twins, Ted and Virginia. Born in San Francisco, California, June 22, 1915. Our observation in October, 1932, through the courtesy of the Probation Department of Los Angeles County, California. Ted has an I. Q. of 106; and the delinquency in which he alone was involved, was a mild one, consisting in a traffic violation. In November, 1930, he was brought into Juvenile Court, following his arrest for speeding—52 miles per hour in a 15-mile zone. His driver's license was suspended and thereafter the case was dismissed. "Very superior appearing family, living in a beautiful home."

Case 327. T. twins, Dan and Violet. Born in Los Angeles, California, February 17, 1913. Case brought to our attention in October, 1932, through the courtesy of the Probation Department of Los Angeles

County, California. Father is dead; mother remarried; there are six brothers and sisters, some half brothers. Mother and stepfather own their home. There is no delinquency or criminality in the family, other than that in Dan's case. Dan has been before Juvenile Court on at least five occasions, the first time at the age of 13 years, on charges of malicious mischief, traffic violations, and cruelty to animals. One instance of malicious mischief consisted in throwing stones at a passing railroad train and injuring a woman passenger. Cruelty charge consisted in renting horses and not returning them, but letting them stray about without food and care overnight; was in the county jail 2 weeks following arrest on that charge, in the early part of 1931.

Case 328. D. twins, Albert and Alberta. Born in Salt Lake City, Utah, March 18, 1914. Case brought to our attention in October, 1932, through the courtesy of the Probation Department of Los Angeles County, California. At that time, however, there was no longer any problem in the case of these twins. The delinquency, which involved Albert alone, consisted of a single episode in August, 1930, when Albert was arrested and placed in the county jail for entering a store and stealing cigarettes. Following a hearing before the Juvenile Court he was granted probation for 1 year, made good, and the case was dismissed at the end of that time.

Case 329. P. twins, Frank and Gwendolyn. Born in Tucson, Arizona, December 31, 1914. Our investigation in September, 1932, through the courtesy of the Probation Department of Los Angeles County, California. Gwendolyn has always been a good child, has caused no trouble, does well at school, helps mother in the housework at home. Frank's delinquency has consisted of a single episode, in June, 1932, when he was brought before the Juvenile Court on a charge of burglarizing a mountain cabin together with five other boys. Court ordered restitution in the amount of \$91.50 and Frank was granted probation. When interviewed by us in his home in September, 1932, Frank seemed a nice boy, apparently not vicious, very much ashamed of his juvenile court record, said it was "just a lark."

Case 330. W. twins, Howard Lorne and Mary Louise. Born in Petersburg, Ontario, Canada, April 21, 1917. Observed by us in August, 1932, through the courtesy of Victoria Industrial School, Mimico, Ontario. "Mary Louise is attending high school and doing satisfactorily." Howard is of mediocre intelligence; I. Q. 92. The father of these twins has a court record for making "bootleg" and selling it to tourists. He and his wife quarrel frequently until the neighbors have to interfere. There are two other sets of twins in the family, but they have no court records. The Children's Aid Society has taken the younger children. Howard was committed to the Victoria Industrial School on August 11, 1930, and at the time of our investigation of the case 2 years later he was still an inmate there. He was committed for entering and theft: he, with another boy, entered a house and took the contents of a purse found in a dresser drawer; also some food out of the cupboard.

Case 331. S. twins, Anthony and Anna. Born in Dilles Bottom, Ohio, October 9, 1917. Our observation in July, 1932, through the

courtesy of Boys' Industrial School at Lancaster, Ohio. "Anna is in high school and is doing well." Parents foreign-born, Croatian; father killed in mine in 1926; mother peddles patent medicines; poor home. Older brother has long court record. Tony was first brought into court at 12 years for stealing. Has had five court appearances since. His last offense for which he was committed to the Boys' Industrial School was indulging in fellatio with younger boys.

Case 332. W. twins, Harold and Hazel. Negroes. Born in Alabama, July 29, 1914. Our observation in July, 1932, through the courtesy of Boys' Industrial School at Lancaster, Ohio. Both parents are dead; twins live with a maternal aunt; home is in poor colored district. No mental test in Hazel's case, but she is obviously of normal, though mediocre intelligence, has a record of satisfactory reports of progress at school, and has been free from behavior difficulties at home, school, or elsewhere. Harold was committed to the Boys' Industrial School on September 26, 1930; and, at the time of our observation of the case, was still an inmate there. The institution psychologist's report indicates a normal intelligence (I. Q. 100) and states, "Most of his delinquencies have been committed in company of other boys, largely as a result of unfortunate environmental factors." Harold was first brought to the attention of the court in February, 1928, at the age of 13 years, for breaking into a dwelling and stealing money and jewelry. He was placed on probation. In April, 1930, he was again in court, with other boys, for stealing from the National Biscuit Company wagon; he was in court on two other occasions for thefts, and was finally committed.

Case 333. V. twins, Eugene Louis and Eugenia Louise. Born in Seattle, Washington, November 7, 1913. Our investigation in October, 1932, through the courtesy of the Probation Department of Los Angeles County, California. Parents and three younger children, 4 to 11 years old, live in a neat home. Eugenia is a very nice appearing young lady, had done well at school, has since worked as a mother's helper for her board and \$10 per month, is engaged to be married, has presented no behavior difficulty. Eugene's delinquency consisted of two episodes: In June, 1930, he was in court for molesting two girls, 7 and 5 years of age; was placed on probation and his case was dismissed at the end of 1 month, as he was apparently making good, "having joined the Y. M. C. A. and taken an active interest in athletics." On April 28, 1932, he was arrested in Beaumont, California, for destroying property of the Southern Pacific Railroad—telephone booth, telephone wires, and semaphore lights. He did this in company with eight or ten other boys, who had boarded a freight train for Imperial Valley, in search of a job. They were put off the train by the guards, and Eugene admitted being the instigator of the damage—though "for fun and not in a malicious spirit." After 20 days in jail pending a hearing he was finally granted probation.

Case 334. S. twins, Dennis and Doris. Negroes. Born in New York City, March 14, 1914. Our investigation in July, 1931, through the courtesy of the Institute for Child Guidance in New York City. Dennis is somewhat more intelligent than Doris. Stanford-Binet tests

revealed, for Dennis, I.Q. 105, for Doris, 93. Doris had to repeat the fourth grade in school, but otherwise has had no difficulty in studies or in behavior at school or elsewhere. The mother seems to have been a factor in Dennis' delinquencies, by reason of her own emotional instability and outbursts of temper. Doris is tolerant of this, is better poised than her mother, and seeks to soothe mother's outbursts when they happen. Dennis, on the other hand, has resented mother's outbursts and has been disobedient and impertinent toward her. In October, 1928, Dennis stayed away from home and school for a week, till found by the police. He said he had slept in the park and swiped milk bottles off porches which he sold for nickels to buy food. Finally longed for comforts of home and let himself get caught. On March 26, 1929, because of repeated truancy and at mother's request he was sent to the Parental Home, Flushing, New York, from where he was paroled on June 25, 1929, because of "exemplary conduct." However, on account of further trancies and disobedience, he was sent to the House of Refuge on October 18, 1929; and paroled from there on March 10, 1930. Since returning from the House of Refuge he has had occasional jobs, but mainly just "bums around." He has continued to be very antagonistic toward his mother, and finally, in June, 1931, left home and his whereabouts were still unknown about a month later at the time of our investigation of the case. His body build suggests a residual of puny immaturity at birth and early childhood, as he is 8 inches below normal height for his age, also underweight, and extremely sensitive about this.

Case 335. H. twins, Thomas and Betty. Born in Ann Arbor, Michigan, in 1914. Our investigation in August, 1932, through the courtesy of the Psychopathic Hospital at Ann Arbor, Michigan. Betty is in high school, doing well in her studies, has never presented any behavior problem, is described as "normal in every way." Thomas is of mediocre intelligence (I.Q. 92). According to the history of his case, there has been trouble practically from birth: convulsions during the teething period; enuresis all his life; speech rapid, jerky, and indistinct; as a young child was afraid of policemen, would scream at the sight of them; since 8 years has been irritable, impatient, and had temper tantrums; has failed three times in school. He was first brought before the Juvenile Court in July, 1930: he had taken an automobile from the street, was driving too fast, was stopped for speeding, and it was discovered that the car was not his. He was then put on probation. In October, 1930, he was again arrested and placed in the County Detention Home for stealing two other cars. When brought before the judge he had a spell in which he screamed and then fainted. At the Detention Home he attempted suicide by tying bed clothes around his neck. On January 7, 1931, he was placed in the Psychopathic Hospital at Ann Arbor for observation where a diagnosis was made of "psychopathic personality, constitutional inferiority, forensic actions, juvenile delinquency," whereupon he was transferred to the Ford Republic, Ford, Michigan, on February 10, 1931. He was still there at the time of our investigation of the case.

Case 336. G. twins, Herbert and Elizabeth. Born in Buffalo, New York, May 13, 1918. Our investigation in September, 1932,

through the Psychopathic Hospital at Ann Arbor, Michigan. Our information concerning Elizabeth is solely from the case history record, which states that she died in 1930, at the age of 12 years, following an operation for appendicitis complicated with general peritonitis. She had done well at school, was in seventh grade, had never presented any behavior difficulty. Herbert weighed less than 4 pounds at birth. Had severe temper tantrums as a child, given to nail biting since early childhood, always a day-dreamer, seclusive. "Pouts, is sulky and stubborn unless he has his own way; won't play with other children unless he is boss." Has always been an habitual truant from school. At 9 years he left home several times and was gone 2 or 3 weeks at a time. Has always been inclined to lie and since 9 years has been stealing, at first from his mother, but now takes goods from home and stores and tries to dispose of them. "When whipping is attempted he yells bloody murder and calls the neighbors to protect him from being killed." He was in the County Detention Home for 2 weeks in 1927 for theft; 2 weeks in 1929 for truancy; and 3 months in 1930 for persistent truancy and incorrigibility. In March, 1932, he was placed in the Psychiatric Hospital at Ann Arbor for observation. There he was noted as "having occasional outbursts, quarreling with other patients, having a grudge against the whole world; making friends with none at the hospital and being a nuisance to all; no rapport could be established with him; giving a history of masturbation, mutual masturbation and pederasty with other boys." On April 18, 1922, he was transferred to Ford Republic, Ford, Michigan, and was still there at the time of our investigation of the case.

Case 337. McC. twins, Neil and Netta. Born in Los Angeles, California, May 31, 1914. Our investigation in September, 1932, through the courtesy of the Probation Department of Los Angeles County, California. The father deserted when the twins were 8 years old; mother earns \$60 a month as a cleaning woman and thus supports herself and the twins. Netta did exceptionally well at school, graduated from high school with honors, now working in the daytime and taking a night school secretarial course. Neil is of somewhat above-average intelligence, but has lagged in his work at school "from lack of incentive." When nearly 14 years of age he began running away from home and remaining away weeks at a time; would steal money from paper boxes at street corners. In June, 1931, in company with three other boys, he was arrested for burglary, having run away from a foster home in which he had been placed by the Catholic Bureau. He had robbed a poor box in the Catholic Church; was implicated in entering a feed store and committing two hold-ups. Was placed in a Catholic school at Watsonville, but ran away from there, arrested for shoplifting, returned to the school, then again ran away. On September 4, 1931, he was committed to Whittier State School, and was still there at the time of our investigation. Described as "loud-mouthed, profane, uncontrollable temper, bullies other boys."

Case 338. A. twins, John and Beatrice. Part Indian. Born in Nogales, Arizona, October 16, 1917. Our investigation in September, 1932, through the courtesy of the Probation Department of Los Angeles County, California. Family consists of the parents, the twins, and

two other children; live in a neat home in Mexican neighborhood. None of the other children, including Beatrice, has been in any trouble; but John has had a persistent tendency to play hookey from school and run away from home, staying away for days at a time. This has happened six times within 3 years. On May 4, 1932, in company with four other boys, he was caught in the act of burglarizing a cigar stand; he then also confessed to some other thefts from school and from a parked car. Following a hearing before the Juvenile Court he was granted probation; now selling papers and giving the money to his mother.

Case 339. N. twins, George and Georgetta. Born in Huntington Park, California, June 21, 1918. Our investigation in September, 1932, through the courtesy of the Probation Department of Los Angeles County, California. Georgetta is a very superior girl, doing well in school, perfectly healthy, "always the direct opposite of George in manners and habits." George is of normal intelligence (I. Q. 100) and had no serious difficulty until the age of 7 years. At that time he was run over by an automobile, had arm and leg broken, also sustained a head injury and was critically ill for 2 months. About one year after the accident he began to have epileptic seizures, had one episode of status epilepticus, but then received treatment in the Children's Hospital, since when the seizures have been much less frequent. Gradually, following recovery from the injury, he developed behavior difficulties: "rough, always fighting, irritable; had to be excluded from school; mean to his two sisters; disobedient; numerous complaints from neighbors as nuisance and menace to life and property." In January, 1932, he was arrested for burglary, was in Juvenile Hall about 6 weeks, then given probation at home. Did not do well on probation: "intolerable toward older sister; uses profane language; draws obscene pictures; unable to adjust in special school." He was returned to Juvenile Hall in April, 1932, and was released again in June for placement by special arrangement in the home of one of the probation officers. He was still there at the time of our investigation of his case.

Case 340. W. twins, William and Eleanor. Born in Winslow, Arizona, October 22, 1912. Our investigation in October, 1932, through the courtesy of the Probation Department of Los Angeles County, California. Eleanor is a student in junior college, helps with housework at home, has never presented any behavior difficulty. The twins come of good family, have a comfortable home, are well supplied with pocket money, etc. At home William seemed well behaved, but at school had been in petty troubles for years, unknown to his father. He also was known to the police as associating with a gang of boys not altogether desirable. On November 5, 1928, he was arrested, in company with two other boys and charged with burglary of the Methodist Church in the town. Following a hearing before the Juvenile Court he was granted probation, and finally the case was dismissed on December 2, 1929. At the time of our investigation, nearly 4 years later, he was working at a gas station and had been in no further difficulty.

Case 341. J. twins, David and Delia. Born in Los Angeles, California, June 22, 1915. Our investigation in February, 1933, through the courtesy of the Probation Department of Los Angeles County, California. David's delinquency was of a very mild character and consisted of a single episode. On a Saturday evening he was going to a party to be given by three other boys. Having seen a pint bottle of whiskey in dresser drawer, he decided to take it to the party and treat the boys. As he was about to enter the house and hesitated on the sidewalk two officers came along, questioned him, and then searched him, finding full bottle unopened. He was charged with Wright Act violation (possession) and brought before the Juvenile Court on January 25, 1931. Following hearing he was granted probation for 1 year, and his case was dismissed at the end of that time. Delia has never been in any difficulty; is attending high school, doing excellent work.

Case 342. E. twins, Warwick and Florence. Born in Pasadena, California, August 5, 1916. Our investigation in February, 1933, through the courtesy of the Probation Department of Los Angeles County, California. Warwick's delinquency consisted of a single and very mild episode. He, in company with three other boys, were riding in an automobile, left car to wander around in the public park, tried marksmanship and thus broke a street light. They were arrested by officers and charged with malicious mischief. Brought before Juvenile Court on June 2, 1932, he was ordered to pay his share of the damage, whereupon his case was dismissed. Florence has presented no problem of any kind.

Group 70. Juvenile delinquency; normal intelligence; female alone affected. 1 case: No. 343.

Case 343. A. twins, John and Mary. Born in Aurora, Illinois, April 15, 1916. Our investigation in July, 1932, through the courtesy of St. Vincent's Orphanage, Illinois. The home background is very poor: the father has chronic tuberculosis and spends a large part of his time in hospitals; when out, he drinks to excess, and when drunk beats Mary so severely that she has to stay at home for a few days until the bruises heal. By reason of the unsatisfactory home environment, the authorities have placed John in the Catholic orphanage. He is well behaved, except that he runs away when not allowed to go home to see his mother, she being too poor to visit him. He is always perfectly willing to return to the orphanage after his visits to his mother. Mary's delinquency developed around the age of 10 years and consisted at first in truancy from school. At 12 years she forged her mother's signature on a \$12.50 check, cashed it, and distributed the money among her classmates. At 14 years she jumped on a girl and hurt her so that the girl had to remain at home for three weeks. In August, 1931, she ran away from home and remained away for several days. More recently she developed a racket of going into stores, buying a cheap article, stealing an expensive one, and then returning the stolen one and getting the money for it. There is no record of a mental test for either twin, but they seem to be of normal intelligence.

Group 71. Adult criminality; normal intelligence; male alone affected. 17 cases: Nos. 344-360.

Case 344. Della M. twins, Luigi and Mary. Born in Italy, June 21, 1876. Our investigation in December, 1932, through the courtesy of Dannemora, New York, State Hospital for insane convicts. Luigi's offenses have been entirely of sexual nature, mainly sodomy upon boys. In 1922 he was sentenced for a term of 5 to 7 years. Upon release, almost immediately, he was convicted of a similar offense and sentenced for a term of 15 years. While serving his second sentence he developed psychotic symptoms and was transferred to the Dannemora State Hospital, and was still an inmate there at the time of our investigation of the case. Mary is married, has eight children, has never been in trouble with the police, has never had any mental disorder.

Case 345. D. twins, John and Mary. Born in Ware, Massachusetts, August 25, 1898. Our investigation in September, 1930, through the courtesy of the U. S. Veterans Bureau Hospital, Northampton, Massachusetts. The criminality in John's case is mild and incidental to the incipient stage of his psychosis. He had been a policeman, had some domestic difficulty, and was charged with, and convicted of, nonsupport. While serving his sentence on that charge he was discovered to be psychotic and, on June 17, 1927, was committed to the Northampton, Massachusetts, State Hospital. His mental trouble, according to the history, had developed in August, 1926, or before. Soon after his commitment to the state hospital he was transferred to the U. S. Veterans Hospital No. 95, and was still an inmate there at the time of our investigation of the case. The official diagnosis is dementia praecox, paranoid. Mary presented nothing in the way of psychotic, criminal, or other abnormal tendency.

Case 346. W. twins, Jeff and Nanny. Born in Franklin, Texas, June 30, 1888. Our investigation in June, 1931, through the courtesy of the Oregon State Penitentiary. Jeff had no prior criminal convictions, nor, as far as known, any criminal tendency. In November, 1930, he was committed to the Oregon State Penitentiary for a term of 20 years, following conviction on a charge of rape (statutory) of a 14-year-old girl. At the time of our investigation he was still an inmate there. No criminal or other abnormal behavior has been noted in Nanny, who is married and keeping house for her family.

Case 347. G. twins, Roy and Rose. Born in Kerens, Texas, February 14, 1903. Our investigation in June, 1931, through the courtesy of the Oregon State Penitentiary. Roy has a record of a prior conviction following which he served a term in San Quentin Prison, California, May 13, 1924, to June 23, 1926. He also has a history of at least four previous arrests on suspicion of burglary, auto theft, etc. The known arrests were in Sacramento, Colusa, and Los Angeles, in California, and Phoenix, Arizona. Was released each time for insufficient evidence. He has assumed a number of aliases. On February 26, 1930, he was committed to the Oregon State Penitentiary to serve a 10-year sentence for "assault and robbery and being armed with a dan-

gerous weapon," and was still an inmate there at the time of our investigation of the case. Rose is married, living in Texas, a waitress by occupation, reported to be normal in every way.

Case 348. H. twins, Eugene Curtis and Irene. Born in Blackwell, Oklahoma, June 16, 1904. Our investigation in May, 1931, through the courtesy of the Washington State Reformatory. Eugene was charged in 1926 with theft of a car, and later in the same year with second-degree burglary; both cases were dismissed. In 1928 he was convicted on a charge of attempted petty larceny and served 3 months in the county jail in Aberdeen, Washington. In September, 1930, he was charged with attempted robbery, tried, and acquitted. In 1930 he was charged with breaking and entering and burglary, convicted, and sentenced to serve a term of 1 to 14 years in the Washington State Reformatory. At the time of our investigation of the case he was still an inmate there. His own account of the last offense is as follows: "Walter E. and I broke into Wm. W.'s home and stole some liquor, a watch, and an auto tire. I took nothing but the liquor. E. was arrested with the watch and tire in his possession. He told on me. E. was released." Eugene had been a bookkeeper; married and later separated; I. Q. 102. Irene is married, keeps house for her family, worked as a saleslady prior to marriage, reported as normal in every way; has never been in any difficulty.

Case 349. T. twins, Lawrence F. and Clara. Born in Alabama, June 15, 1897. Our investigation in April, 1931, through the courtesy of San Quentin Prison, California. Lawrence was committed to San Quentin Prison March 24, 1930, remained until March 24, 1931, and was then paroled. The crime was "riding in a car without the owner's consent." He had not been in trouble previously except on one occasion when he was fined \$5 for being with a man who was driving a stolen car. Lawrence and Clara were placed in an orphan home in Ohio at the age of 8 years when their mother died. At the age of 9 years Lawrence was taken to live with his uncle and since then has seen little of his sister. However, she was taken out of the orphan home by another uncle and aunt and was given a better chance than Lawrence. She went through high school, "has always been very good, is a stable person," is married, and lives with her family in Ohio.

Case 350. H. twins, Howard and Hannah. Born in Kentucky, May 15, 1904. Our investigation in April, 1931, through the courtesy of San Quentin Prison, California. Howard has had 10 years of schooling, finished second year of high school. He was brought up together with his twin sister until the age of 15 years, when he left home. He was sentenced to San Quentin for bank robbery and entered the prison March 31, 1926. At the time of our investigation he was still an inmate there. Although he has no official prior criminal record, he admits having done things before without being caught; would not mention anything specific. Hannah had 3 years in high school; prior to her marriage lived at home and helped in the housework. She has never shown any criminal tendency and is at present "a very dutiful housewife."

Case 351. P. twins, Edwin and Lena. Born in Lynn, England, January 20, 1876. Our investigation in August, 1932, through the courtesy of the Toronto, Canada, Psychiatric Hospital. Edwin's crime was of a sexual character, namely, exhibitionism. Following his arrest he was placed in the Psychiatric Hospital in Toronto where he was under observation for about 8 days in March, 1931. He was then sentenced to the Provincial Gaol, Toronto, for 2 years less 1 day; and, at the time of our investigation, was still an inmate there. He had been organist of several of the most prominent churches in Canada and is said to be an exceptionally fine musician; but lost one job because of drinking and two others because of scandals connecting his name with several women. The offense which led to his arrest was as follows: he stood in the concourse of a large department store and whenever a woman approached he opened his coat and exposed his privates, making signs to them. Complaints had been coming in to the store about this for several days, so finally two of the store detectives caught him. He is married and has two children. Lena is the wife of a contractor in Canada, "a very fine woman," well to do; has helped Edwin financially several times; is at present paying for the education of his younger son.

Case 352. C. twins, George Francis and Margaret. Born in Sioux City, Iowa, October 21, 1900. Our observation in November, 1932, through the courtesy of the Los Angeles, California, county jail. These twins are the only children of their parents; grandparents lived to be between 80 and 90 years of age; parents are living and well; the family is free from mental disorders, criminality, alcoholism, or other abnormality, except that of George. Margaret graduated from high school, then married, has two girls who are now in school, has never been in any difficulty whatever. George, though of normal intelligence, has never taken any interest in school, finished but the fourth grade at 14 years, then left to go to work despite the wish of his parents that he go on. He got a job as truck driver, did that for 3 years; at 17 years he enlisted in the Army, served for 8 years and, at 25 years, received an honorable discharge. He married at 18 years; was divorced at 26 years; married again at 30 years; no children. On August 23, 1932, he was arrested and placed in the Los Angeles county jail on a charge of two counts of grand theft: in company with two other men he had stolen an auto truck and trailer. All three entered pleas of guilty and George's two partners were sentenced to imprisonment in San Quentin and Folsom, respectively. George, too, was sentenced to go to San Quentin, but a stay of execution was obtained for him and he was placed in the Psychopathic Hospital for observation as to his mental condition. In November, 1932, he was adjudicated sane, but, at the time of our observation, was still in the jail fighting to obtain a new trial.

Case 353. R. twins, Harry and May. Born in Jacksonville, Florida, November 26, 1908. Our observation in November, 1932, through the courtesy of the Los Angeles, California, county jail. The twins came of good family; the father died at 37 years of pneumonia; the mother is living and in good health. The twins have two brothers who are normal in every way. May is married to a dental surgeon;

she herself is a graduate of Barnard College, and, at the time of our observation, was a dental student at Lehigh University. At the birth of the twins the labor was prolonged, the difficulty being mainly with Harry: he was delivered in breech presentation and had "a black eye" at birth. He was graduated from New York University in 1932, having majored in electrical engineering. He had driven a friend from New York to Los Angeles to the Olympic games when he was arrested, in September, 1932, and charged with car theft, two counts; he also had received four tickets for speeding. At the time of our observation he was awaiting trial.

Case 354. K. twins, Frank and Frances. Born in Buffalo, New York, January 16, 1897. Our observation in December, 1932, through the courtesy of Dannemora, New York, State Hospital. At the time of our observation Frank was a patient in the Dannemora State Hospital for insane convicts, having been transferred there from Clinton Prison on account of "a psychotic episode in a psychopathic personality." He had been previously a patient in Dannemora, namely, from June, 1930, to March, 1931, with a similar psychotic episode. At the end of that time he had recovered from his psychotic symptoms and was returned to Clinton Prison. He appears to be of normal intelligence. Is serving a sentence of 20 years, plus 5 years additional, for first-degree robbery with the use of a revolver. He has a long criminal record. Was confined five times in Erie County Penitentiary for such offenses as intoxication and petty larceny. In 1915 he was arrested for carrying burglar's tools. In December, 1918, he received a suspended sentence for burglary and was returned to the Army from which he had deserted. Frances is married, keeping house for her family, has never been in any difficulty with the police, has had no mental trouble, seems to be normal in every way.

Case 355. S. twins, Claude and Eve. Born in Chase, Kansas, November 12, 1902. Our observation in December, 1932, through the courtesy of Folsom Prison, California. The twins come of good family and are of German-French descent; they have one older brother who is married, employed at a good salary; parents are living and well. There are no instances of criminality or other mental abnormality in the family, other than that of Claude. Eve has had 2 years in college, is a gown designer and has a wealthy clientele. Claude has a B.A. degree with a major in commerce. He has a record of persistent criminality which seems to have begun at the age of 21 years: In 1924 served 6 months in St. Louis workhouse for burglary and forgery; in 1926 was arrested and placed in the Chicago jail and charged with embezzlement, but the case was dismissed for insufficient evidence, and he was released after 15 days. He served from April, 1927, to March, 1929, in the Kansas State Reformatory for grand larceny. During the year 1931 police records show that he was wanted in Los Angeles, Fresno, San Diego, also in Memphis, Tennessee, and by the Burns Detective Agency in San Francisco for forgeries of traveler's checks and bank checks. In February, 1932, he was committed to Folsom Prison for 1 to 14 years for forgery, two counts, and, at the time of our observation of the case, was still an inmate there. The above

official record contains but a fraction of his crimes; he had 15 aliases which he used in connection with a great many check forgeries and the like.

Case 356. P. twins, Pete and Marie Leone. Born in New York City, December 10, 1912. Our investigation in October, 1932, through the courtesy of the Probation Department of Los Angeles County, California. Pete, a young farm laborer, has been given to petty crimes, is described as a futile, ambitionless person; would work 3 days and lay off 2 days. In debt to an ice cream company in the amount of \$13.75 for ice cream which he had taken out to peddle, but failed to turn in the money for. Was implicated in theft of a tire, but at that time was not prosecuted. At 17 years was brought before the Juvenile Court in Los Angeles County for vagrancy: he had been arrested at Central Market where he had been hanging around, would not go away when told, stole fruit, was shooting craps with some other boys, and "was generally a nuisance." After a hearing the case was dismissed. Was in county jail about 10 days in December, 1930, for breaking into a grocery store and stealing two hams, some bacon, and some eggs. As he was just over 18 years, his case was dismissed from the Juvenile Court, and he was not further prosecuted. Marie lives in Pennsylvania, has never been in difficulty, is married and keeping house for her husband, said to be doing very well.

Case 357. B. twins, Alfred and Virginia Grace. Born in Texas, January 24, 1910. Our investigation in March, 1931, through the courtesy of San Quentin Prison, California. Alfred's behavior difficulties started in childhood. His institutional record is long, starting at 10 years when he was in the State Reform School in Texas for over a year. In 1923 he was in the county jail at Dallas, Texas, for about 6 months, in the Juvenile Department. Was there a second time in 1924 for 9 months. Was also in jails in Pine Bluff, Arkansas, and in Los Angeles and Riverside counties, California, in 1927 and 1928. His delinquencies have consisted mainly of car theft, bootlegging, robbery, burglary, and one assault with a deadly weapon with intent to kill. On February 18, 1928, he was committed to San Quentin Prison, California, following conviction for robbery of a cafe. At the time of our investigation of the case he was still an inmate there. In telling his story he said he liked work and committed his many offenses only when he could not get work and was flat broke or when he was drunk; said he was the only "bad one" in the family. Virginia reached the third year in high school, then took up stenography, has been in no difficulty, now works as a stenographer.

Case 358. J. twins, John Fred and Elizabeth. Born in Newtown Square, Pennsylvania, September 8, 1900. Our investigation in July, 1932, through the courtesy of Eastern State Penitentiary, Philadelphia, Pennsylvania. John reached the eighth grade at school, had had no difficulty either in studies or in deportment. At 17 years he ran away from home, and in the same year was arrested for chicken stealing, spent one night in the Westchester, Pennsylvania, county jail, and was released the next day when the chickens were paid for. He was mar-

ried at 23 years, lived with wife only one year, and was later divorced. His last offense was sodomy upon a 16-year-old boy, for which he was sentenced to Eastern State Penitentiary for a term of $2\frac{1}{2}$ to 5 years; was admitted there in January, 1932, and was still an inmate there at the time of our investigation. It was impossible to obtain from him a detailed history of his sexual life. In the prison he is confined in a ward designated as "solitary," in which are kept the known homosexuals. Elizabeth reached the eighth grade in school; until her marriage she helped her mother at home; married 4 years, no children; works out to help family finances. Has never been in trouble of any kind.

Case 359. C. twins, John Murile and Mary. Born in Norway, January 4, 1861. Our investigation, through the courtesy of Eastern State Penitentiary, Pennsylvania, in July, 1932. John went as far as the eighth grade in school in Norway; got along well in studies and in deportment; however, he was given to petty thefts in boyhood and later as a sailor. He went to sea at 9 years on an apprentice ship. At 20 he ran away from ship in Baltimore, Maryland, enlisted in the U. S. Navy, on the battleship Texas, served through four wars. Has been a steady drinker all his life. On June 21, 1930, he entered Eastern State Penitentiary to serve a 6 to 12-year sentence following conviction on a charge of manslaughter. Original charge was murder. The episode was the result of drunken brawl; John claims a drunken man attacked him and he killed him in self-defense. Mary's history, as given by the prisoner, was that she had had a high school education, later became a trained nurse, worked in one hospital for 22 years; was steady, reliable, economical; never in any difficulty; died at 60 years in Norway, cause of death not known to informant.

Case 360. T. twins, Grantis Mark and Dorothy. Negroes. Born in Manayunk, Pennsylvania, November 18, 1898. Our investigation in July, 1932, through the courtesy of Eastern State Penitentiary, Philadelphia, Pennsylvania. Mark finished the eighth grade, but his behavior difficulties began at school with habitual truancy. His occupation was chauffeur; also musician; he married at 21 and has one child. His official criminal record goes back to the age of 12 years, when he served 30 days in the Philadelphia county jail for vagrancy. In 1918 he was sentenced for 1 year to the Atlantic City jail "for sitting in automobile." In 1921 he was sentenced to serve 5 years in the Maryland Penitentiary, Baltimore, for car theft. In February, 1932, he was sentenced to serve 10 to 20 years in Eastern State Penitentiary, Pennsylvania, for burglary, and was still an inmate there at the time of our investigation of the case. When asked if he had committed other offenses, not included in the official record, Mark said he had never done anything he had not been caught at. Dorothy graduated from Teachers' Training School in Atlanta, Georgia; married at 25, no children. Was an obedient child; is now teaching school, happily married, respected in the community.

Group 72. Adult criminality; normal intelligence; female alone affected. 5 cases: Nos. 361-365.

Case 361. C. twins, Hazel J. and Hal G. Born in Joplin, Missouri, May 10, 1905. Our investigation in December, 1932, through the courtesy of the Los Angeles, California, county jail. Hazel had a partial high school education and her occupation is given as actress. No history of her case is available other than the official criminal record, and this goes back to the age of 23 years when she was arrested for shoplifting in Kansas City and fined \$25. Between 1929 and 1930 she served 6 sentences of from 10 days to 6 months for drunkenness, petty thefts, shoplifting, and violation of State Poison Act. In July, 1930, she was convicted of burglary, two counts, and sentenced to San Quentin Prison, California, for 1 to 14 years. At the time of our investigation of the case she was still an inmate there. Hal has never been in difficulty either in his native state or since coming to California. He works in a garage, lives with his mother and is the support of the household; is not married; "seems to make every effort to make up to the mother for the grief Hazel has caused her."

Case 362. D. twins, Katheryn and Leo J. Part Negro. Born in Jamaica, West Indies, in 1891. Our investigation in July, 1932, through the courtesy of the Reformatory for Women at Dwight, Illinois. Katheryn's occupation is given as evangelist, singer, and writer. Her husband is a Hindu whom she married "according to the rites of his country." At the time of our investigation of the case he was in jail awaiting trial and deportation for practicing medicine without a license and performing abortions. Katheryn has a prior record of 1 year in 1930-1931 in the House of Correction, Chicago, for beating her husband because he was too attentive to his women patients. Her commitment to the Dwight Reformatory for Women was on December 4, 1931, for a term of 14 years, for assault with intent to kill; she had attacked two of her husband's women patients with a knife. A psychiatric examination in 1931 yielded the report: "She considers herself a spiritualistic medium; is so unstable that when crossed, her immediate reaction is homicidal; expresses grandiose ideas, says her husband gives her a check for \$10,000 every week, she could not live on less." Since admission to the Reformatory she is reported to have been "downright mean; has vowed to kill one of the matrons; is a constant complainer, has resentful attitude; has had epileptiform attacks, considered hysterical in nature. She has canvassed girls in the reformatory to let her perform abortions on them; is also a sex pervert, seducing other girls, is now kept in an isolation cell; writes long, rambling letters to the Superintendent, the Governor, and others filled with pseudo-scientific terms and religious phrases." The information concerning her twin brother, Leo, is meager. It is known, however, that he was an attorney, without any police record; was shot and killed in a disorderly house in a fight, having gone there to get his wife and to bring her home.

Case 363. R. twins, Vivian and Vernon. Born in Tennessee, June 16, 1899. Our investigation in July, 1932, through the courtesy

of the Reformatory for Women in Dwight, Illinois. Vivian's criminality centers around morphine addiction. She is of normal intelligence, I. Q. 106. She finished two years in high school at 18 years, then started nurse's training in a hospital in Chicago, but left to get married. Had one pregnancy, but had it aborted. She has been a morphine addict for 10 years; says it began following an appendectomy; got the drug from the man who later became her husband, and he still gets it for her. She has taken five cures without result. She was committed to the Reformatory for 6 months on March 3, 1932, for possession of a hypodermic syringe and needle; was still an inmate there at the time of our investigation of the case. Vernon is an automobile salesman; is "a bit wild and something of a spendthrift," but has never been in any trouble with the police; is married and takes care of his family.

Case 364. McD. twins, Dorothy and James. Born in Scotland, April 9, 1909. Our investigation in August, 1932, through the courtesy of the Psychiatric Hospital at Toronto, Canada. The parents died when these twins were very young and both were placed in a foundlings' home where they were brought up. At the time of our investigation Dorothy had one illegitimate child born in London, England, just prior to her coming to Canada, and a second one born in Canada where she had been living out of wedlock for a year and a half with a man who later put her out after he had found her in bed with one of the boarders. She has lived more or less promiscuously with a number of men. She was arrested in February, 1931, for writing several bogus checks and placed for observation in the Toronto Psychiatric Hospital. During her 10 days there she was seen to have a typical epileptic seizure, but was not aware of ever having had one previously. With that exception, no neuropsychiatric trouble was found that might justify her placement in a mental hospital, and she was committed to the Woman's Farm, Toronto, Canada, and was still there at the time of our investigation. James is a blaster by occupation, in good health, married, has three children; has no court record. At the time of Dorothy's court trial he appeared in court and testified that she had always been in trouble.

Case 365. R. twins, Edna and Kelter. Born in Wapakonita, Ohio, May 6, 1891. Our investigation in August, 1932, through the courtesy of Toronto Gaol, Canada. Edna's difficulties are traceable largely to alcoholism. She had been drinking heavily for about 5 years, had been in private sanitariums on two occasions, had grown very nervous and irritable, became promiscuous sexually; finally her husband, quite a prominent business man in Toronto, left her and later obtained a divorce. On the day of her arrest, in September, 1931, she was on her way home from a bootlegger's, driving her car in a drunken condition and having, in addition, some bottles with her. She ran her car up the sidewalk and on to a lawn and crashed into a veranda on which some people were sitting. She was sentenced to 3 months in Toronto Gaol which she served from September 3 to December 3, 1931. Kelter is the manager of a life insurance office in Reading, Pennsylvania, and is a very fine man.

Group 73. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; male alone affected. 8 cases: Nos. 366-373.

Case 366. B. twins, Jack and June. Born in Long Beach, California, June 15, 1926. Our observation in October, 1931, in one of the Long Beach city schools. When Jack finishes what he is eating, unless the parents watch closely, he picks up the dish and throws it on the floor. This is not done in a fit of temper, but in an indifferent manner, and no amount of reasoning with him or even punishment seems to affect him at all. If his sister gets in his way he hits her or knocks her down, although otherwise he seems fond of her. The kindergarten teacher has reported him several times for the same traits, and the school has threatened to transfer him to a special opportunity room. He does not seem to have temper tantrums, but when anything is in his way he removes it by force, utterly regardless of consequences, and no appeals seem to have any weight with him. Very stubborn; when he starts to do anything he can not be deferred, except by force, and then he returns to it the first moment he is free to do so. There is no record of a mental test for either twin, but Jack is obviously of subnormal intelligence. June is a bright, pleasing, attractive child. Her kindergarten teacher says she is quite the leader of the class. Her mother says she is very helpful at home and anxious to learn new things; responds promptly to appeals.

Case 367. R. twins, Milton Eugene and Mary Ellen. Born in Long Beach, California, June 4, 1925. Our observation in November, 1931, through the courtesy of one of the Long Beach, California, city schools. Milton is of somewhat subnormal intelligence, I. Q. 84. He is described as painfully shy, cries almost whenever he is asked to do anything, does not seem to know how to play, refuses to cooperate with other children; when toys are put before him he knocks them away or breaks them. He still wets and soils himself and is felt to be such a problem in the kindergarten that they feel they will have to dispose of him otherwise. Mary is of average intelligence, I. Q. 97. She seems to adjust satisfactorily in kindergarten. She is quiet and obedient, gets on well with the other children.

Case 368. L. twins, Marvin and Marita. Born in Pasadena, California, July 12, 1924. Our observation in March, 1932, in one of the Pasadena, California, city schools. Marvin spends most of his time at school weeping. He utterly lacks self-confidence. Will not attempt anything by himself, but cries because he can not do it. He jumps and looks frightened when any one speaks to him, and then bursts into tears. Has occasional enuresis; is thin and undernourished; it is hard to get him to eat. He does not play with other children, but just sits and dreams. There is no record of a mental test for either twin, but Marvin is obviously of subnormal intelligence. He has been unable as yet to complete the first grade in school, while Marita has already had two promotions beyond him. As regards Marita, the counselor's report states: "Her emotional control is very good; she is socially very well adjusted; self-confident and helpful at all times."

Case 369. McE. twins, Paul and Jessie. Born in California, in 1921. Our observation in November, 1931, in one of the Long Beach, California, city schools. Paul is of slightly below-average intelligence, I. Q. 88. His behavior problem is mainly one of truancy from school and running away from home. His parents say he has been "a wanderer all his life." Plays hookey almost weekly. "Today (Nov. 18, 1931) he had just been returned after a 10-day absence from school. He was found in North Long Beach trying to beg his way into a picture show. How he had spent his time meanwhile could not be found out, as he refused to tell." He often asks to go to the toilet, then leaves school and is not seen again for several days. He causes no other trouble, and is rather quiet and secretive. Usually he goes off alone, although once he coaxed a younger child to go with him. His parents say he causes no trouble except for this trait, and they are unable to watch him closely enough to prevent his running away. Generally, upon his return, his appearance suggests that he has spent his time out in the open. He seems to have no interests in any of his school work and no hobbies. Jessie seems to be an average child in every way and presents no behavior difficulty. She is of average intelligence, I. Q. 100; is in 6B grade; does average work; gets on well with other children.

Class 370. D. twins, Charles and Clara. Born in Monterey Park, California, March 14, 1919. Our investigation, in December, 1931, through the courtesy of the Research Department of the Alhambra, California, city schools. Charles is of slightly subnormal intelligence, I. Q. 81. He has been a very difficult boy at school for years: "disturbs the whole class by talking, whistling, running around, punching other children; has frequent and violent temper tantrums; fights other boys." Has a speech difficulty, can not sound "th," says "de" for "the." Other children make fun of him on account of his speech defect. He greatly dislikes school. He has been placed in an opportunity room; later recommended for state institution, but the parents refused to have him committed. He was finally evicted from public school because of lighting fire in school room. At the time of our investigation of the case he was on trial in a parochial school. Clara is of average intelligence, I. Q. 98; she works diligently at her studies and with average success. She has never caused trouble either at home or at school; is ashamed of her twin's behavior and seems to try to make amends for it.

Case 371. R. twins, LeRoy and Anna. Born in Illinois, May 11, 1919. Both parents are said to be of subnormal intelligence, and both are intemperate; father is said also to be psychotic and epileptic. Anna has presented no problem of any kind. She has done well at school and was due to enter the eighth grade in the fall of 1932. Her aunt, with whom she had lived for 7 years, spoke highly of her, said she was a fine helper in the house. No record of a mental test. LeRoy has been abnormal from the start. Was a bed-wetter for years; at 11 years was still in the first grade. A mental test in 1932 revealed I. Q. 58. He was also a behavior problem at school; often absent, con-

stantly defiant; teacher said, "No one could accurately describe the terrible behavior of this boy." Finally the school refused to keep him. He was referred to the Lower North Side Child Guidance Clinic in Chicago, which reported, in June, 1930: "He continues to run the streets; steals and is becoming increasingly difficult to control." On November 17, 1930, he was committed to the Dixon State Hospital, Illinois. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there.

Case 372. G. twins, Gideon and Catherine. Born in Nogales, Arizona, October 25, 1913. Observed by us in April, 1931, in one of the Los Angeles, California, city schools. Mental tests in 1930 revealed, for Gideon, I. Q. 77; for Catherine, 95. Gideon presents a double problem: he is very backward in his studies and is "schizoid" in his attitude and behavior. He is described by his mother as "extremely sensitive, very easily downed; will not show temper, but is quietly resentful toward any one who hurts his feelings; seldom ever makes up to such person." Catherine is doing well in her studies and presents no problem of any kind.

Case 373. K. twins, Frederick Field and Freda. Born in Melrose Highlands, Massachusetts, May 8, 1906. A maternal aunt is epileptic; mother "very nervous"; paternal grandfather had migraine. The home is one of prosperity and culture. The twins represent the mother's only pregnancy. Labor was at full term, but prolonged, difficult, and with use of instruments and anesthesia. Freda was the first-born, has always been in good health physically and mentally, graduated from high school at 18 years and was on the honor roll, and has been entirely normal since. Frederick was the second-born; a podalic version was performed, followed by rapid extraction. He weighed 6½ pounds, head rather large; had to be resuscitated; legs and hands seemed paralyzed, and he was judged at the time to have sustained a cerebral birth trauma. "He cried practically all the time during infancy and childhood." Had a convulsion when 3 days old, and has been having *grand-mal* and *petit-mal* seizures since, the former at the rate of two or three a year, the latter almost daily and up to several in one day. The paralysis which he seemed to have at birth quickly disappeared, leaving behind merely increased knee-jerks, poor muscular coordination, and divergent strabismus of right eye. There was some delay in learning to walk and talk, as compared with his sister, and he has done poorly in his studies at school. A mental test in 1931 revealed I. Q. 73. In his early adolescence he developed rather marked behavior difficulty, became emotionally unstable, quarrelsome, abusive and threatening toward his mother, and would run away from home and disappear, for several days at a time, two or three times a year. On August 1, 1923, he was committed to the Monson State Hospital, Massachusetts (for epileptics), and at the time of our observation of the case, which was in August, 1932, he was still an inmate there.

Group 74. Child behavior difficulties, preneurotic and prepsychotic types; subnormal intelligence; female alone affected. 5 cases: Nos. 374-378.

Case 374. G. twins, Marian May and George. Born in Worcester, Massachusetts, September 2, 1918. A paternal aunt of the twins is said to be defective and delinquent; the mother, too, is said to be subnormal mentally. Marian was born by breech presentation and was a "blue baby." She began to have convulsions at 6 months at the rate of one or two a month, but occasionally in series lasting all night. From 2 to 4 years she was free from them, but then they began again and have since continued at the average rate of four a week. She has never talked, makes inarticulate noises and gestures. Walks and feeds herself; has choreiform movements; is very untidy. At times becomes tempestuous, screams, hits, bites. On October 22, 1922, she was placed in the Hospital Cottages for Children at Baldwinville, Massachusetts, from where she was transferred to the Monson State Hospital, Massachusetts, on December 7, 1923. At the time of our observation of the case, which was in August, 1932, she was still an inmate there. No record of a mental test, but her mental deficiency is judged to be in the degree of idiocy. George is a normal boy, free from epilepsy, goes to school, makes good progress.

Case 375. B. twins, Georgina Teresa and George. Born in Toronto, Ontario, Canada, November 22, 1911. Our investigation in August, 1932, through the courtesy of Ontario Hospital, Toronto. Home background very bad: mother said to be mentally dull; father is serving a term in Kingston Penitentiary for theft. Georgina was raped by her father when she was 10 years old, and she has been sexually promiscuous since then. Also, she did poorly at school, reached but the sixth grade, is obviously of subnormal intelligence, although there is no record of a mental test. In addition to her behavior difficulty, which was mainly sexual, she developed, at the age of 16 years, a tendency to have frequently recurring psychotic spells, classified as manic-depressive in type. Thus, in 1928, "she became very excited, laughing loudly, screaming, and crying without cause; created a disturbance at the factory where she was employed, also in her home neighborhood; slapped anyone who tried to interfere with her; talked incessantly and at random." She had three admissions to the Ontario Hospital, Toronto, in 1928, 1929, and 1931, and, at the time of our investigation of the case, she was still a patient there. George died at the age of 16 years of diphtheria. He is said to have been "perfectly normal in every respect."

Case 376. C. twins, Mary Agnes and John. Born in Darlington, Indiana, March 3, 1901. Our investigation in November, 1930, through the courtesy of Patton, California, State Hospital. Mary was a problem from birth. She was the first-born of the twins, was delivered with difficulty, by podalic version. There is no record of a mental test, but she was obviously of subnormal intelligence; barely reached the eighth grade at school, and that with difficulty, whereas John went on to high school and later continued his education while serving two enlistments in the Navy. Mary was described as "of

violent temper always, kleptomaniac since 7 years of age (stole from stores), sexually promiscuous since the age of 16, and a pathologic liar." She was emotionally unstable, irresponsible; her father paid bills that she had incurred, in the amount of \$1,300, when she forged his name to checks; on one occasion attacked her sister with a carving knife; on another occasion attempted suicide; in September, 1925, was delivered of a stillborn 5-month baby, illegitimate; in 1926 had another illegitimate pregnancy, with a psychotic complication. On July 2, 1926, she was committed to Patton State Hospital with a diagnosis undecided as between "psychopathic personality with psychosis" and "dementia praecox hebephrenic type." Since then she was tried at home on parole twice, but had to be returned to the hospital both times after a period of a few weeks. At the time of our investigation of the case she was still a patient there. Recent case notes state she is "slovenly as to personal appearance, indifferent to her surroundings, indolent; irritable and quarrelsome at times." John is normal in every way, is Chief Gunner's Mate in the Navy, is a torpedo expert, helps his mother financially.

Case 377. F. twins, Louise and John. Born in Mishawaka, Indiana, November 29, 1901. John developed normally, finished school at 14, then went to work, is a teamster, married, makes a good living for his family. Louise has never been a healthy child, began to have seizures, light and severe, in early childhood. She did poorly at school, left at 15 years when she had attained but the fifth grade. From the age of about 13 years she has had psychotic symptoms of gradually increasing severity and associated with a progressive deterioration. After school she tried to work in a paper mill and as a domestic, but could not keep a position longer than a week or two. At home she was emotionally unstable, showed disagreeable disposition, would set fire to clothes, run and hide, refused to eat with the family, made use of profane language, attempted suicide, would at times become so violent that she had to be restrained; epileptic seizures continued to occur both day and night, and finally, on February 4, 1932, she was committed to the Logansport, Indiana, State Hospital. At the time of our observation of the case, which was in July, 1932, she was still an inmate there. On admission to the hospital, a physical examination revealed increased knee-jerks, right talipes equino-varus, also ankle clonus and Babinski sign on right side. Recent case notes state: "Excited, restless, many mannerisms, threatens violence to other patients; has also attacked visitors on the lawn." A mental test in 1932 revealed I. Q. 54, but it would be impossible to say to what extent this might be attributed to original mental deficiency and to what extent to deterioration.

Case 378. W. twins, Edna Pearl and Edwin. Born in Fairview, Pennsylvania, in 1888. Edna did poorly at school, advanced only as far as the sixth grade. There is no record of a mental test, but she is judged to be mentally deficient in the degree of high-grade moronism. Her main difficulty has consisted in episodes of excitement which increased in frequency and severity to such an extent that she could no longer be cared for at home. On April 11, 1929, she was com-

mitted to the Western State Hospital at Salem, Oregon. A diagnosis of mental deficiency with periodic psychotic spells was made. She was tried on parole twice, in 1929, and in 1930, but each time she had to be returned after several months. At the time of our investigation of the case, which was in August, 1931, she was still an inmate there. Edwin has always been in good health physically and mentally and is well adjusted.

Group 75. Child behavior difficulties, predelinquent types; subnormal intelligence; male alone affected. 5 cases: Nos. 379-383.

Case 379. P. twins, Winan and Wanda. Born in Compton, California, December 4, 1923. Our observation in January, 1932, through the courtesy of one of the Compton, California, city schools. Winan is of slightly subnormal intelligence (I. Q. 87). "He does practically nothing in his school work; is sulky and sullen with his teachers; a frequent ditcher, hangs around pool halls. He does not get on well with the other pupils, fights with them, bullies the younger ones, is generally disliked, considered not a good sport." Wanda is of average intelligence (I. Q. 100); "does good average work at school, tries hard; has a good disposition, and gets on well with everyone."

Case 380. P. twins, Paul and Helen. Born in Glens Falls, New York, April 11, 1916. Our investigation in December, 1931, through private reference. These twins come of a family of nine children in which are included three pairs of opposite-sex twins. Our Case No. 381 is one of these pairs of twins (see below). The family history, on the paternal side, reveals a markedly psychopathic strain: the paternal grandmother was alcoholic, committed suicide. A paternal great aunt and one paternal uncle also committed suicide. The father was so religious that he had his car painted with religious mottoes; he made his living on Chautauqua and Lyceum concert tours as singer and impersonator; he was described as "very temperamental"; had one nervous breakdown from which he recovered, but 7 years later, on return from one of his concert tours, he committed suicide when he learned that his wife had not paid debts that he had sent her money for. Paul, with an I. Q. of 88, is "a musical genius," but is "totally irresponsible" and "will not use his ability for his own support or to help the family." He was a bedwetter up to the age of 16; also stole up to about the same age "whatever appealed to him, both at home and outside the home." He reached the ninth grade at school, but was failing in all subjects, including citizenship, and finally had to be taken out of school following a stealing episode. At the time of our investigation he was "living in luxury" in a hotel, with an older man, a musician. He is esthetic, indolent, effeminate, affects an English manner, despises "the common herd," and when his twin sister was married his comment was that she was "just plain vulgar." Helen is more studious; very dependable; helps in the home as much as she can; married recently, but is continuing with a business course she began a few months ago. She is more intelligent than Paul; I. Q. 110.

Case 381. P. twins, Robert and Carol. Born in Glens Falls, New York, April 22, 1922. They are brother and sister to the P. twins in our Case No. 380 (see above), investigated by us at the same time. Robert has been a bedwetter all his life, and still is. This is attributed by the family to his being a very heavy sleeper: "he fights like a tiger if anyone tries to waken him, so we make no effort to waken him to prevent his wetting the bed." He has "an awful temper" when crossed. At the age of about 8 years he began to steal money, first at home, later from other children and from teachers at school, for candy, shows, etc. On three occasions he disappeared from home and arranged to spread the alarm that he had been kidnapped. On one of these occasions he left a note in the door which read: "I am the doctor. I took the boy. I am going to kill him with this: (picture of an axe). Your friend, The Doctor." Later he confessed that he had stolen 30 cents from his sister's purse, went to the movie across the street, stayed through two shows, and was brought back by the police at 1 a.m. He is of slightly subnormal intelligence (I. Q. 89). Carol is of average intelligence (I. Q. 102); is studious, dependable; advanced one grade beyond Robert at school; has presented no behavior difficulty.

Case 382. H. twins, Ray and Faye. Born in Oklahoma, December 3, 1914. Our observation in December, 1931, in one of the Redlands, California, city schools. The home background is very poor. Ray is of slightly subnormal intelligence (I. Q. 88). He was suspended from school for stealing, which had apparently been going on for some time. He had previously been sent to the office for cheating on examinations. The school principal described him as "a boy of no standards, no basis on which you could make an appeal to him; he would say 'boloney' to any appeal to his honor." Faye is much more intelligent, I. Q. 109. She is described as a very nice girl, well adjusted, makes average grades in her studies, or better.

Case 383. L. twins, Walter and Bertha. Born in Germany, in 1908. Walter was admitted to the Dixon, Illinois, State Hospital (for epileptics) on October 19, 1923. At the time of our observation of the case, which was in June, 1932, he was still an inmate there. Case history very meager. Upon admission he was having 10 or 15 seizures a month, but they gradually became less frequent and he had had none at all for over a year prior to June, 1932. His case, however, was complicated with mental deficiency (or deterioration), persistent behavior difficulty, and occasional psychotic symptoms. A mental test in 1926 revealed I. Q. 56. Neurological examination revealed impaired hearing in right ear and increased knee-jerks. He has been very troublesome, quarreling and fighting with other patients; on one occasion struck a patient and broke his nose; on another occasion was caught practicing homosexuality with other patients; on still another occasion he, with two other boys, broke into the stockroom and stole clothes, tobacco, and matches. He has also been very moody from time to time and, in December, 1925, attempted suicide by locking a belt around his neck; was found in a cyanotic condition. Bertha has always been in good health physically and mentally, free from epilepsy or behavior difficulty, works at home on the farm.

Group 76. Child behavior difficulties, predelinquent types; subnormal intelligence; female alone affected. 1 case: No. 384.

Case 384. A. twins, Mabel and John. Born in Detroit, Michigan, August 12, 1906. Father is alcoholic. The twins had ten brothers and sisters, three of whom died of epilepsy; one had an infantile palsy. Mabel began to have epileptic seizures at the age of 11 years at intervals varying from one to two days to several weeks. Even before the seizures began she presented a behavior problem in the nature of sex delinquency and was taken in hand by the St. Vincent de Paul Society. On December 20, 1920, she was committed to the Farm Colony for Epileptics at Wahjamega, Michigan, and at the time of our observation of the case, which was in September, 1932, she was still an inmate there. The seizures are often preceded by a period of unruliness, defiance, profanity and obscenity in language. A mental test in 1922 revealed I. Q. 58, but it would be impossible to state to what extent this is attributable to original mental deficiency and to what extent to deterioration. John has always been in good health physically and mentally, has never had a seizure, finished eighth grade at 14, and has since worked as a chef. No record of a mental test, but his intelligence is obviously normal or better.

Group 77. Juvenile delinquency; subnormal intelligence; male alone affected. 10 cases: Nos. 385-394.

Case 385. F. twins, Homer and Lethia. Negroes. Born in Toledo, Ohio, October 17, 1918. Our observation in July, 1932, through the courtesy of the Boys' Industrial School, Lancaster, Ohio. Home background very poor: economic condition low; family live in a single room; father was killed in a dice game; mother remarried; stepfather mean to the family; Homer hates him. Homer was admitted to the Boys' Industrial School on February 13, 1932, for "incurability and truancy from home." At the time of our investigation of the case he was still an inmate there. According to the history of his case, he had caused a good deal of trouble since 1930: habitual truancy from home and from school; stealing from home and from trucks; "no discipline has hitherto been successful in straightening him out." A mental test following his admission revealed I. Q. 83. At the school, too, he proved to be difficult; used a knife on another boy there in an altercation; prognosis considered unfavorable for rehabilitation. Lethia has been sent to live with relatives on a farm in Missouri, and is getting along very satisfactorily; has never presented any behavior difficulty.

Case 386. B. twins, Donald and Dorothea. Born in Detroit, Michigan, August 27, 1917. At the time of our investigation of the case, which was in February, 1931, Dorothea was in the eighth grade in school, making normal progress, fond of her work, of calm and sociable disposition, and presenting no problem of any kind. Donald, too, got along normally until the age of 8 years, when his troubles began, following a head injury. He fell a distance of two stories, landing on a concrete pavement, was rendered unconscious and remained so all night,

and kept bleeding from his mouth and nose. Upon recovery from the immediate effects of his injury, a great change was noticed in him. He complained of severe frontal headaches, developed a tendency to stutter; at times walked in his sleep, would scream out, and would resist violently all attempts to get him back to bed; the next day he would have no recollection of these episodes. He also became a persistent truant from school and developed a habit of running away from home. He became disobedient, difficult to manage, had temper tantrums, and in anger would pound his head on the floor or pavement. Soon, he developed also a tendency to steal money from home. Often he would spend all day in picture shows and would remain out late at night by himself. He was known in the neighborhood as a vicious boy who quarrels and throws stones at other children. Finally, on July 30, 1930, he was committed to Whittier, California, State School. At the time of our observation of the case, which was in February, 1931, he was still an inmate there. A mental test in 1930 revealed I. Q. 73. The institution records state: "Although a great deal of time was spent in an effort to get at the underlying reason for the boy's persistent running away, he insisted that he just gets the notion all at once." The boy said: "Feeling rotten, terrible, just sitting down in a chair thinking, then all at once I just go off."

Case 387. S. twins, Joe and Cecilia. Born in Missouri, September 19, 1917. The twins come of a good home, and were the first-born of five children. Only Joe has been a problem, his twin sister Cecilia and the three younger children being normal in intelligence and in behavior and having done well at school. Joe is of subnormal intelligence; a mental test in 1931 revealed I. Q. 57. He did very poorly at school, soon became a persistent truant, and was first brought into Juvenile Court at the age of 12 years for that reason. Since then, he has been in court three more times for stealing fruit and candy. Said he wanted to be put in jail, thought it would be fun to ride in the police patrol. In the summer of 1931 he broke into a box car, then ran away from home (in Ohio), got as far as Buffalo, New York, was apprehended, returned to Ohio, and on September 18, 1931, was committed to the Boys' Industrial School at Lancaster. At the time of our observation of the case, which was in July, 1932, he was still an inmate there. His record at the institution has been unsatisfactory: has tried to escape; stole sweet potatoes from the kitchen and ate them raw; stole table silver and hid it in his room; uses vile language; was found indulging in homosexual practices with another boy; stole things from one boy, hid them in another boy's desk, then tried to throw the blame on the other boy.

Case 388. T. twins, Frank and Susie. Born in South Lebanon, Ohio, August 6, 1916. Our investigation in July, 1932, through the courtesy of the Boys' Industrial School, Lancaster, Ohio. The twins were second in birth order of six children. The father died in 1931; the home is very poor; mother makes \$3 a week as a cleaning woman. Frank was brought into Juvenile Court for burglarizing a school and was committed to the Boys' Industrial School on January 13, 1932. At the time of our investigation of the case he was still an inmate there. He had previously been before the court, together with

another boy, for stealing an automobile. On that occasion Frank was released on suspended sentence. A mental test in January, 1932, revealed I. Q. 86. His conduct record at the Industrial School has been poor since his admission: "indifferent, careless, sloppy, fights with other boys." Susie was placed in the Warren County, Ohio, Children's Home some years ago, because of extreme poverty in her own home. Their reports of her are very favorable; she presents no behavior problem and seems normal in every way.

Case 389. B. twins, Luis and Juana. Part Indian. Born in Mexico, June 21, 1915. Juana is a normal girl, rather attractive, helps in homes and care of babies, has never been in difficulty. Luis is of subnormal intelligence; mental test in 1932 revealed I. Q. 65. He has been before Juvenile Court in Los Angeles, California, on three occasions, twice in 1930 and once in 1932, respectively, for "malicious destruction" (of railway switch lights), stealing from a warehouse, and stabbing another boy in a fight three times, necessitating treatment in the Receiving Hospital. At the time of our investigation of the case, which was in September, 1932, he was at home on probation: disagreeable, rather ill-tempered, undersized, smaller than his twin sister.

Case 390. S. twins, Theodore F. and Virginia. Born in Kentucky, January 15, 1915. Our investigation in July, 1932, through the courtesy of the Boys' Industrial School, Lancaster, Ohio. Both parents are dead, twins live with elderly aunt, who states that Virginia has never caused any trouble, "is a darling, a perfect child." But the aunt has never been able to control Theodore. He has been known to the Juvenile Court since 1926, when he was brought there on account of being a persistent truant from home and being incorrigible. He was released to the care of the Bureau of Juvenile Research. He ran away from home again and thereupon was committed to Franklin County Children's Home. In 1928 he was returned to court for destroying railroad property. He continued to cause trouble, and in January, 1930, was in court again for automobile theft. Was then released on suspended sentence, but in August, 1930, was picked up with a strange man in an automobile, indulging in homosexual relations. He was then placed in the Boys' Industrial School, and was still there at the time of our investigation of the case. A mental test upon admission there revealed I. Q. 87. He stated that his ambition was to join a circus, so he could travel from place to place. His conduct at the Boys' School has been quite unsatisfactory: "defiant, impudent, sticks pins in other boys, urinates on the floor, steals food from kitchen, etc."

Case 391. H. twins, William Thomas and May. Born in Spokane, Washington, April 25, 1913. William was before the Juvenile Court at the age of 14 years for burglary and at 16 years for "delinquency," unspecified. Released to parents each time. In the summer of 1930 he was again arrested on a charge of assault in second degree, and on July 2, 1930, he was sent to the State Reformatory at Monroe, Washington. At the time of our investigation of the case, which was in May, 1931, he was still an inmate there. His own account of his offense is as follows: "A girl about 10 years of age came to our house selling papers. I met her at the door and asked her in the house. I asked her

to take off her pants, but she would not, so I started to take them off. She began crying, so I stopped and let her go. She went home and told her parents. I was arrested." He was sentenced to the reformatory for 1 to 10 years. A mental test in 1930 revealed I. Q. 78. May has never presented any problem. She is doing well as a stenographer in Princeton, British Columbia, Canada. No record of a mental test in her case.

Case 392. T. twins, Clarence and Lena. Born in Reno, Nevada, October 26, 1912. Our investigation in October, 1932, through the courtesy of the Los Angeles County, California, Probation Department. Home background bad; family of 22 children, 13 of whom are living. Three brothers of the twins have been delinquent and feeble-minded; two of them have been in Preston School of Industry at Ione, California. Clarence was first arrested in 1925 for climbing into attic of moving picture theater, causing plaster to fall, and creating a panic; was then placed on probation. In July, 1931, he was associating with a gang of boys well known to the police, and was arrested on account of being implicated in burglary of a candy store. He was again granted probation. Since then he has done well; was at home, with good conduct reports, at the time of our investigation of the case. A mental test revealed I. Q. 82. Lena "is a fine girl, married to a truck driver, no children, works in cannery during season"; has never presented any behavior difficulty.

Case 393. M. twins, Kenneth and Lucille. Born in Chicago, Illinois, February 5, 1912. Our investigation in July, 1932, through the courtesy of Institute for Juvenile Research, Chicago, Illinois. Kenneth's behavior difficulty seems to be traceable to a severe attack of pneumonia, complicated with delirium, at the age of 7 years. Since that illness he has been "different," father thinks he is "off." He is a persistent truant, hangs out with motormen in a car barn, is given to the use of profane language. He was doing rather poorly at school; is of subnormal intelligence, I. Q. 83. He was first brought before Juvenile Court in March, 1926, and was committed to the custody of the Evangelical Lutheran Home Finding Society. In July, 1928, he was released to his father. At the time of his commitment he was reported as "impertinent, defiant, and very destructive; walks down the street and breaks windows, calls women vile names; stays out over night; was expelled from school for obscene talk." There was also a history of bedwetting up to the age of 13 years. Lucille is apparently normal; doing much better in her school work; has never presented any behavior difficulty.

Case 394. C. twins, Allen and Alice. Born in Vermont, May 31, 1909. Allen has presented both mental deficiency and a behavior problem. A mental test in 1927 revealed I. Q. 54. In 1925 he fell in with evil associates who apparently exploited him in bootlegging, etc. The police took him off the street in Massachusetts and took him to court on charge of hugging girls. He was sent to the Boston Psychopathic Hospital for observation. As he was a legal resident of Vermont, arrangements were made for his placement in the Brandon

State School, Vermont, on December 28, 1925. On July 20, 1928, he was granted parole for work on a farm. He did well and was discharged on June 16, 1930. At the time of our investigation of the case, which was in August, 1930, he was still working as a farm hand and adjusting satisfactorily. Alice has shown no evidence of mental deficiency, made normal progress at school, and has presented no behavior problem. No record of a mental test.

Group 78. Juvenile delinquency; subnormal intelligence; female alone affected. 4 cases: Nos. 395-398.

Case 395. H. twins, Christina and Kenneth. Born in Dundalk, Ontario, Canada, February 21, 1917. Christina did poorly at school, reached but the sixth grade at 15 years. A mental test in 1932 revealed I. Q. 72. Since the age of 9 years she has had a record of petty thieving, such as taking candy and fruit from stores. She has been expelled from school several times for breaking rules and "incurability." She has also been a persistent sex delinquent: "takes no interest in anything but boys; has been intimate with a boy with an old court record." In October, 1931, she ran away with another boy and was then committed to the Edith L. Groves School for Delinquent Girls, where she remained until January, 1932. On March 30, 1932, she was committed to the Ontario Hospital at Orillia, Canada. At the time of our observation of the case, which was in August, 1932, she was still an inmate there. At this institution she has been noted as being lazy, stubborn; "refuses to work, says she is sick; has indulged in temper tantrums at night until she has to be put in a restraining sheet." Kenneth is in the eighth grade now (1932) and reported as satisfactory; has been truant several times, but not enough to get him into trouble. No record of a mental test.

Case 396. P. twins, Ruth Olivia and Richard Olanda. Born in San Francisco, California, January 29, 1915. Ruth has always been somewhat shy, "schizoid," also of slightly subnormal intelligence; mental test in 1929 revealed I. Q. 79. She became a sex delinquent before her fourteenth birthday, going out with sailors, strangers met on the street, etc. In August, 1929, she disappeared from home, and it was learned later that she had been picked up by a couple of strangers who took her to their room, gave her liquor, and had sexual intercourse with her. In February, 1930, she again disappeared from home, having been picked up by a sailor. She was then committed to Ventura School for Girls, California, on February 21, 1930. At the time of our investigation of the case, which was in December, 1930, she was still an inmate there. At the institution she has been cooperative, an honor girl, described as somewhat shut-in and self-conscious. Richard is of normal intelligence, is in the second year of high school, is partly earning his way, has presented no problem of behavior.

Case 397. K. twins, Pauline and Paul. Negroes. Born in Los Angeles, California, August 30, 1914. Pauline is described as of sullen, unfriendly temperament, emotionally unstable, unreasonable, with general persecutory trend. She is also of subnormal intelligence; a

mental test in 1932 revealed I. Q. 78. She has been running around with married men, and on June 3, 1932, she was placed in Juvenile Hall, Los Angeles, as a sex delinquent. She was then found to be 3 months pregnant. After a couple of months there, she was dismissed, as she was approaching the age limit of juvenile court jurisdiction (18 years). There is no record of a mental test in Paul's case, but he did very well at school, both in scholarship and in behavior, and, at the time of our observation of the case, which was in September, 1932, he had worked for the same employer for 2 years and was highly recommended.

Case 398. O. twins, Mary and Frederick. Born in Stapleton, Staten Island, New York, January 13, 1914. Our observation in November, 1932, through the courtesy of Manhattan State Hospital, Ward's Island, New York. Mary has had a bad school record, both as to studies and conduct. She is of subnormal intelligence; mental test in 1930 revealed I. Q. 74. She has been something of a tomboy, often dressing in boys' clothes, very athletic, interested in boys' games. Around the age of 15 years, or before, she developed a habit of staying out all night; would be found wandering about the streets and returned home by the police in the early hours of the morning. In February, 1930, she was charged in Juvenile Court with being a wayward minor and put on probation. She soon violated probation by going riding with a man and later accompanying him to a hotel. In March she repeated this performance. In April she was found riding around aimlessly in a taxicab, was arrested on a complaint filed by her father, and committed to Westfield State Farm, Bedford Hills, New York, where she remained for 1 year, and was released on parole at the end of that time. In May, 1931, it was reported that she was unmanageable since her release from Bedford, had been out all night four times in the 5 weeks at home. This continued. led to repeated arrests, and finally she developed psychotic symptoms, and on June 3, 1931, was committed to Manhattan State Hospital, where a diagnosis of "psychosis with psychopathic personality, emotional instability" was made. She was at first noted as being noisy, resistive, uncooperative, irritable, but "perfectly oriented and presenting no hallucinations or delusions." For about 8 months she remained stubborn, quarrelsome, threatening, at times requiring restraint. On one occasion she poked her arm through a pane of glass. She was also quite aggressive, fighting with other patients. Eventually she showed improvement and in April, 1932, she was released on parole. She got along quite well until July, 1932, when she was sent to a store on an errand and failed to return. A week later she was found in Providence, Rhode Island, and brought home in an excited state, trying to break windows, and threatening suicide. She was then returned to the hospital, and, at the time of our investigation of the case, was still an inmate there. Frederick graduated from business college and is employed as a clerk (1932). He is well adjusted and is "the pet of the family."

Group 79. Adult criminality; subnormal intelligence; male alone affected. 8 cases: Nos. 399-406.

Case 399. G. twins, John and Isabelle. Negroes. Born in Newport News, Virginia, August 27, 1911. Our investigation in November, 1932, through the courtesy of Sing Sing Prison, New York. John is obviously of subnormal intelligence, although there is no record of a mental test; he went to school from 7 to 14 years, but advanced only as far as the third grade. He has been given to gambling at cards, has been in several fights, often drank to excess, promiscuous sexually, had one child by a "temporary common-law wife." In 1929 he served 60 days in the New York City Workhouse for disorderly conduct. From May to December, 1931, he was in the Virginia State Penitentiary for burglary. On June 14, 1932, he was sentenced to Sing Sing Prison, New York, also for burglary, and, at the time of our investigation of the case, was still an inmate there. Isabelle has had an eighth-grade education, is married, keeping house, well adjusted, has never been in trouble.

Case 400. L. twins, William Chester and Jeanette. Born in Santa Cruz, California, October 29, 1907. The mother is psychotic, in Stockton State Hospital, California. William was first placed in Sonoma State Home at Eldridge, California, because he had done poorly at school and was found to be feeble-minded, in the fall of 1927. He was paroled, after some training, and did fairly well for a time as an automobile mechanic's helper. In the summer of 1930 he was convicted of forgery (checks), but, on account of his previous adjudication as feeble-minded, was not sentenced to prison, but recommitted to Sonoma State Home on June 14, 1930. At the time of our observation of the case, which was in February, 1931, he was still an inmate there. A mental test in 1930 revealed I.Q. 76. Jeanette is of normal intelligence, has presented no problem, reached the fourth year in high school and left on account of having to have a tonsillectomy. Later married, now has two normal children, is well adjusted. No record of a mental test in her case.

Case 401. McE. twins, Hubert R. and Della. Born in Yoevil, Ontario, Canada, September 22, 1907. History very meager. Hubert worked as a farm hand and had no prior criminal record. On March 14, 1931, he was sentenced to the Washington State Reformatory at Monroe for a term of 6 months to 15 years for second-degree burglary. At the time of our investigation of the case, which was in May, 1931, he was still an inmate there. His account of the offense is as follows: "I entered a building and stole steel drills, Hammons saw, etc. I sold the tools for \$7.50. I also stole a camera out of a house where we were rooming. I sold the camera for 50 cents." A mental test in 1931 revealed I.Q. 73. Della is normal, married, lives in Holstein, Ontario, Canada. No record of a mental test in her case.

Case 402. L. twins, Gugliardo and Georgina. Born in Wilkes-barre, Pennsylvania, October 18, 1907. Our investigation in July, 1932, through the courtesy of Eastern State Penitentiary, Philadelphia, Pennsylvania. Gugliardo is of subnormal intelligence, although there

is no record of a mental test. He left school at 15 years, to go to work, having finished but the fifth grade. He worked in coal mines; was also a prize fighter. Married at 20 years, has one child. States he never had deportment difficulty at school, and has no prior criminal record, had never been arrested before. On February 23, 1932, he was convicted on a charge of rape and sentenced to the Eastern State Penitentiary. At the time of our investigation of the case he was still an inmate there. States he is not guilty of the crime for which he was convicted. Georgina finished the eighth grade; helped her mother until marriage. Married 5 years, two children. Keeps house for her family; is well thought of in the community.

Case 403. A. twins, Reuben and Ruth. Born in Bellingham, Washington, February 27, 1903. Our investigation in May, 1931, through the courtesy of Eastern State Hospital, Medical Lake, Washington. Reuben was sentenced to the State Penitentiary at Walla Walla, Washington, May 3, 1924, for murder; but the prison physician found him insane, with disconnected and rambling speech and delusions of persecution. Accordingly, on July 31, 1924, he was transferred to the State Hospital at Medical Lake. At the time of our investigation of the case he was still an inmate there. According to the history of the case, Reuben had a severe infection, diagnosed as influenza, for which he was treated in a hospital for 5 weeks as a young boy. "He was perfectly all right before that, but has never been right since." The infection left him with markedly subnormal intelligence with a deteriorating trend until, finally, he was judged to have slumped to the level of imbecility, although there is no record of a mental test. The murder of which he was convicted occurred as follows: in March, 1924, Reuben, together with his brothers and sisters and George, the fiance of one of his sisters, were sitting together in the living room at home. Reuben was playing with a shotgun and, unnoticed by the others, slipped a shell into it. He then shot George in the heart without warning, killing him instantly. He gave, as his reason, that at one time he had asked George how old he was and George replied, "Oh, about 400 years." Reuben claimed this was an insult, and that he had been figuring on killing George for about a year, but that his nerve had failed him. Ruth is a school teacher, perfectly normal in every respect.

Case 404. R. twins, Mack and Susie. Negroes. Born in Jacksonville, Florida, February 25, 1900. Their mother died in a hospital for the insane. Mack did poorly at school, had reached but the third grade at the age of 12 years, when he left. He also has a poor work record. He has a long criminal record and has used at least one alias. In February, 1922, he was sentenced to the Florida State Farm, at Raiford, for 4 years, for grand larceny, but escaped from there. In 1926 he was sentenced for larceny to the Federal Penitentiary at Atlanta, Georgia, for 4 years. On November 22, 1930, he was sentenced, for breaking and entering, to Western Penitentiary, Pittsburgh, Pennsylvania, for 10 to 20 years. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there. He stated that he had broken into two adjoining jewelry stores in Wilkesburg, Pennsylvania, by breaking the windows; stole jewelry valued at

about \$1,000; sold some of it, and pawned the rest. Theft was traced through pawn shop; he pleaded guilty. A mental test in 1930 revealed I. Q. 70. Susie attended school, leaving at 18, then worked as seamstress, later married, and is a housewife. Has never been in serious difficulty. No record of a mental test in her case.

Case 405. B. twins, Joseph and Mary. Negroes. Born in Lafayette, Louisiana, March 1, 1899. The father and five brothers of the twins are laborers on a farm; mother died at 29 years in childbirth. Mary is normal, has been a school teacher, is now married, and has never been in any serious difficulty. No record of a mental test in her case. Joseph is the only troublesome member of the family. He has a long criminal record: 1 year in U. S. Disciplinary Barracks at Fort Leavenworth, Kansas, for larceny; many arrests and jail sentences for minor offenses, such as drunkenness, disorderly conduct, petty larceny, etc., in Youngstown, Ohio, Buffalo, New York, and towns in Pennsylvania, for terms of 30 days to 6 months. He had done poorly at school, reached the fifth grade, but his educational achievement was scarcely above the second grade. A mental test in 1930 revealed I. Q. 62. Very poor work record. Described as "a typical negro floater, addicted to drinking, gambling, and the pursuit of women." On April 12, 1930, he was sentenced to Western Penitentiary at Pittsburgh, Pennsylvania, for 2 to 5 years, for robbery of \$28 from a candy store, although he claims to have won the money in a crap game. At the time of our investigation of the case, which was in July, 1932, he was still an inmate there.

Case 406. F. twins, Carmelo and Filomena. Born in Italy, April 26, 1891. Carmelo was committed to the State Institution for Male Defective Delinquents at Napanoch, New York, on May 27, 1932. At the time of our investigation of the case, which was in November, 1932, he was still an inmate there. He had cut another Italian with a knife in a fight which grew out of an argument about the war. No previous criminal record. He is illiterate and of subnormal intelligence. A mental test in 1932 revealed I. Q. 47. Filomena is in Italy, married, has never been in any trouble; no record of a mental test.

Group 80. Adult criminality; subnormal intelligence; female alone affected. 3 cases: Nos. 407-409.

Case 407. A. twins, Helen and Moe. Born in Brooklyn, New York, September 25, 1910. Helen presented no problem in childhood and made approximately normal progress at school up to the age of about 13 years, when she reached the seventh grade. At that time a change developed in her. She found the work at school too hard for her, could not get ahead, refused to go to school; also refused to help around the house or to do any work. She then ran away from home, was found and brought back by her father, but soon ran away again. In the course of 2 or 3 years she was found to be increasingly unmanageable and finally, in the latter part of the summer of 1926, she was found living with another girl and a man and suffering from a pelvic infection, and was arrested as "a wayward minor." On September

16, 1926, she was placed in the Kingston Avenue Isolation Hospital, Brooklyn, New York, and remained there under treatment until October 5, 1927, when she was transferred to the Westfield State Farm, Bedford Hills, New York. On September 10, 1928, she was granted a parole in the custody of her parents. Five months later she disappeared from home again, and a month after that was found living in an apartment with two other girls and three men. She had been drinking heavily; the men were notorious gangsters and bootleggers. Accordingly, on March 4, 1929, she was placed again in the Bedford Hills institution. In the course of both her first and second sojourns in that institution she was observed to have, from time to time, psychotic spells, apparently of manic-depressive type. "At periodic intervals she becomes excited, over-talkative, and displays characteristic hypomanic activities; invariably breaks glass when this is available. These periods are of short duration, although the cycles are seemingly becoming more frequent, the last two having occurred within a week of one another. During these episodes she is fully oriented, not hallucinated, but gives expression to fanciful ideas; *e.g.*, stated that she had gone to Arizona and returned the same day." On account of these spells she was transferred, on March 4, 1929, to Matteawan State Hospital (for criminal insane) at Beacon, New York. There she remained until September 17, 1929, when she was returned as "much improved" to the Bedford Hills institution. On December 10, 1929, she was again granted a parole. After 3 months she disappeared once more from home, went to Saratoga Springs, New York, and became an inmate of a house of prostitution. On November 18, 1930, she was arrested, and on December 12, 1930, was committed to the Albion State School, New York (reformatory for girls). From there she was sent back to the Bedford Hills institution on January 27, 1932, and on March 10, 1932, she was given a third trial on parole. This time she got along very well for a while, held one job for several months, rendered satisfactory service, and even received a raise in salary. Then she disappeared again, was found and taken over by the Jewish Board of Guardians. Another job was obtained for her and she did very well for a month, although she appeared quite nervous. On October 20, 1932, she was once more arrested for prostitution, but because she displayed psychotic symptoms again, she was, on October 28, 1932, placed in the Psychopathic Pavilion, Bellevue Hospital, New York City. At the time of our observation of the case, which was in November, 1932, she was still an inmate there. A diagnosis of "psychopathic personality with episodes of elation, irritability, excitement, and sexual misbehavior" was made there, an unfavorable prognosis was rendered, and it was recommended that she be returned to the Bedford Hills institution. A mental test in 1927 revealed I. Q. 79. In the course of her many escapades she had used at least two aliases. She was described by a representative of the Jewish Board of Guardians as "a pathetic figure; she tries very hard with each new chance to do better; one of the jobs was very disagreeable and many people had refused it, but she took it and for a time tried to do her best; but she seems to last only a few months at the

most." Moe has never presented any problem; attended high school for two years, then learned the trade of electrician, and has since been working steadily. No record of a mental test in his case.

Case 408. C. twins, Leona and Leo. Born in Canada, December 26, 1903. The mother died in childbirth at the time the twins were born. The twins were adopted in separate homes. Leona did poorly at school, reached but the seventh grade at 17 years, when she had to leave to go to work, as her foster parents had lost all their money. She worked as a domestic. On May 30, 1931, she was arrested on a technical charge of vagrancy preferred by her foster father. For a year and a half she had been living with a negro; the neighbors complained of their drinking parties late at night. Leona was found to be infected with syphilis. She was committed to the Home of the Good Shepherd at Toronto, Canada, on June 11, 1931. At the time of our investigation of the case, which was in August, 1932, she was still an inmate there. A mental test in 1931 revealed I. Q. 75. Leo had a high school education, then worked as a telegraph lineman; was highly thought of and never presented any behavior problem. He was killed accidentally by a contact with a live wire, while at his work, at the age of 24 years. No record of a mental test in his case.

Case 409. B. twins, Rose and Walter. Born in Bancroft, Ontario, Canada, October 7, 1898. Our investigation in August, 1932, through the courtesy of Toronto Psychiatric Hospital. The mother died when the twins were 6 years old; "the 9 children in the family grew up by themselves." Rose went to school only occasionally, for a few days at a time. She is of slightly subnormal intelligence; mental test in 1930 revealed I. Q. 86. She is a domestic, single, but has seven illegitimate children, all but the last two by different men. The history is incomplete, but the official records show that she served 3 months in Belleville, Ontario, jail in 1922 for two counts of petty theft. In 1923 she was again in difficulty over trying to get a pension from the government, posing as the widow of an ex-soldier with whom she had been living prior to his death. Her last arrest was in August, 1930, on a complaint made by the wife of a man with whom Rose had been living for over 3 years and who is the father of her last two children. She was then placed for 10 days' observation in the Toronto Psychiatric Hospital and from there committed to the Toronto Women's Farm on a technical charge of vagrancy. She remained there for 2 years and was released from there a few days prior to the time of our investigation of the case. Walter is a laborer, married, has no police record, has been in no difficulty. No record of a mental test in his case. Intelligence and education obviously mediocre, but probably within normal limits.

§ 8. NATURE OF THE HEREDITARY FACTORS IN THE ETIOLOGY OF CHILD BEHAVIOR DIFFICULTIES OF ALL TYPES, JUVENILE DELINQUENCY, AND ADULT CRIMINALITY

It is one thing to say that hereditary factors play a part in the etiology of child behavior difficulties of preneurotic, prepsychotic, and predelinquent types, juvenile delinquency, and adult criminality; but it would be quite another thing to say that there are special genetic factors which determine antisocial behavior. For the first proposition there is strong support in the family histories of delinquent and criminal subjects and in the twin material; but for the second proposition the evidence is so inadequate as to be practically negligible.

The question arises, then, *What is the nature of the hereditary factors in the etiology of these conditions?* Other twin studies, notably those of epilepsy (11) and of mental deficiency (10) in twins, have led to the raising of similar questions. The clue that presents itself most prominently and abundantly, as far as twin material is concerned, is that *the hereditary factors which play a part in the etiology of these conditions produce their effect by determining an undue vulnerability of the brain tissues, thus greatly increasing the hazard of a cerebral birth trauma.*

Cerebral birth trauma, as all know, is capable of producing infantile cerebral palsies, epilepsy, mental deficiency, deteriorating psychoses of children and adolescents, and some other conditions. In its turn, cerebral birth trauma results either from the traumatizing factors of difficult labor (contracted pelvis, late primiparity, rigidity of soft parts, abnormal presentations, operative delivery, etc.); or from factors determining an undue vulnerability of the brain tissues (hereditary factors, prematurity, male sex, multiple pregnancy, etc.); or from various combinations of both types of factors.

The conditions which may be produced by a cerebral birth trauma may also be produced by other factors, notably postnatal cerebral trauma and various infections in which there is cerebral involvement.

In our study of mental deficiency in twins (10) we found child behavior difficulties, juvenile delinquency, and adult criminality as being among the more common complications of the mental deficiency.

Perhaps the most outstanding general finding of that study is that of the importance of cerebral birth trauma in the etiology of mental deficiency and of certain complicating conditions with which it is often associated—an importance which had theretofore not been fully appraised.

Can behavior difficulties of childhood, juvenile delinquency, and adult criminality—whether associated with mental deficiency or not—be caused by cerebral birth trauma?

§ 9. CEREBRAL BIRTH TRAUMA AS A FACTOR IN THE ETIOLOGY OF CHILD BEHAVIOR DIFFICULTIES, JUVENILE DELINQUENCY, AND ADULT CRIMINALITY

In the course of our analysis of the material which we had gathered for an investigation of mental disorders in twins it developed that the twin material was serviceable not only, as had been suggested, for the determination of the relative importance of hereditary and non-hereditary factors in the etiology of such disorders, but also as a great aid in the determination of the part played by cerebral birth trauma as an etiologic factor.

In some cases it is possible to establish, by direct observation of happenings in the sequence of their occurrence, the fact of cerebral birth trauma and, later, the residuals or sequels resulting from it.

In other cases, however, the fact of a cerebral birth trauma passes unnoticed at the time of its occurrence, and the part that it has played in the later-noted residuals or sequels therefore remains unascertained.

Many syndromes which are known to occur as residuals or sequels of cerebral birth trauma can, of course, be produced also by other etiologic factors, such as postnatal cerebral trauma, acute infectious encephalitides, neurosyphilis, etc. When, in the course of an investigation of the etiology of a given clinical condition it appears that cerebral birth trauma may play an important part therein, the issue can sometimes be clarified with the aid of statistical techniques, provided, of course, that the necessary statistical data are available in adequate numbers.

Experience has shown that the following criteria must be fulfilled before a given syndrome can be established as one characteristically or frequently originating in cerebral birth trauma.

1. Inasmuch as there are apparently hereditary factors among those determining cerebral vulnerability, it may be expected that, if one of a pair of monozygotic twins shows the syndrome under consideration, the other of the pair will also be affected, by a similar or dissimilar traumatic syndrome,—not invariably, but consistently more often than in a control group of dizygotic twins.

2. In a significant proportion of cases the affection in the two twins of a monozygotic pair may be expected to be dissimilar quantitatively or even qualitatively (*i.e.*, with different traumatic syndromes, as, for example, epilepsy in one and mental deficiency in the other); the reason being, that factors other than hereditary may determine both degree of cerebral vulnerability and severity, extent, and localization of the birth trauma.

3. Partly by reason of the hereditary factors, the near relatives of subjects with syndromes produced by cerebral birth trauma may be expected to be affected by traumatic syndromes, similar or dissimilar, more often than random groups from the unselected population.

4. The degree of genetic relationship that exists between dizygotic twins is the same as that existing between siblings. However, twins, more often than siblings, are exposed to common prenatal and intra-natal factors other than heredity. For this reason it may be expected that the dizygotic twin brothers and twin sisters, of subjects affected by a syndrome produced by cerebral birth trauma, will also be affected by a traumatic syndrome, similar or dissimilar, more often than their singly-born siblings.

5. Inasmuch as premature birth, or underweight condition at birth, or both, are among the factors determining cerebral vulnerability, it may be expected that subjects with a history of such conditions at birth will furnish a higher proportion of any given syndrome produced by cerebral birth trauma than the unselected population.

6. Conversely, among subjects exhibiting a given syndrome produced by cerebral birth trauma, we may expect to find a relatively high proportion of cases with a history of premature birth, underweight condition at birth, or both.

7. Because premature birth, underweight condition at birth, or both, occur more often in twin than in single births, the incidence of any given syndrome produced by cerebral birth trauma may be expected to be higher among twins—either monozygotic or dizygotic—than among singly-born subjects.

8. For obvious reasons, any syndrome attributable to birth trauma may be expected to occur mainly as a disorder of childhood, adolescence, or early adult life. Similar syndromes developing in later life may be expected to be less common and would be attributable to lesions of other origin: postnatal trauma, cerebral arteriosclerosis, neurosyphilis, brain tumor, and the like.

9. Inasmuch as cerebral vulnerability is more marked in male than in female fetuses and infants, sex becomes a factor. Accordingly, it may be expected that any given syndrome attributable to birth trauma will be found with greater frequency in males than in females.

10. Inasmuch as labor is, as a rule, more prolonged and more difficult in primiparae than in multiparae, we may expect to find the incidence of any given syndrome produced by cerebral birth trauma to be higher among first-born than among later-born subjects.

11. For similar reasons, it may be expected that an etiologic relationship will be found to exist between any factor of dystocia—narrow pelvis, breech or other abnormal presentations, early rupture of the amniotic sac, conditions necessitating rapid or instrumental extraction, and the like—and any given syndrome produced by cerebral birth trauma.

12. Although the various conditions which have been listed as syndromes characteristically and frequently produced by cerebral birth trauma (infantile cerebral palsies, mental deficiency, epilepsy, behavior difficulties, early deteriorating psychoses) are often enough seen as isolated clinical manifestations, it may be expected that, with significant frequency, any one of them will be found in combination with one or more of the others in the same subject: *e.g.*, epilepsy in association with a behavior difficulty; or subnormal intelligence followed by psychotic disease developing in adolescence or at an early adult age. This is to be accounted for, of course, by the common etiology of such syndromes.

The question, whether or not cerebral birth trauma plays an important part in the etiology of child behavior difficulties, juvenile delinquency, and adult criminality, may be investigated by the application of these criteria.

Applying the first of the twelve above-enumerated criteria, we find, by referring to Table I (page 8), that its requirements are fulfilled. Thus, for male twins, we note concordance of findings in 85.1 per cent of the monozygotic pairs, and in but 47.1 per cent of the dizygotic pairs. The corresponding figures for female twins are 90.7 and 45.3 per cent for the monozygotic and dizygotic pairs, respectively.

The second criterion (intra-pair dissimilarities in monozygotic twins) we find, by referring to the individual case records of our monozygotic twin pairs with concordant findings, to be also fulfilled.

Among the 80 pairs of male monozygotic twins with concordant findings, there were at least three pairs in which the twins were affected dissimilarly (Case Nos. 78, 79, 80). Also, among the 39 pairs of female monozygotic twins with concordant findings, at least four pairs were affected dissimilarly (Case Nos. 98, 124, 131, 133). Slight dissimilarities in behavior, temperament, intelligence, or physique have not been included in this count, but would constitute a large amount of additional evidence.

As to the third criterion (familial occurrence), our material does not contain the data that would be required in the test. The literature, however, affords ample evidence of an extremely high incidence of criminality, mental deficiency, psychoses of adolescence, and epi-

lepsy among the near relatives of delinquent and criminal subjects in comparison with the unselected population.

Thus, the studies of S. and E. T. Glueck (1, 3) have yielded the following data and comments:

"It is impossible to state with accuracy what percentage of the general population of Massachusetts or of the United States is criminal. To estimate it at 5 or 10 per cent would be to place it probably too high, even if one were justified in including violations of the prohibition and automobile laws. In the families of our group of 510 graduates of the *Massachusetts Reformatory*, however, there is an official record of arrests or commitments for violation of criminal laws which is extremely high and which throws light on the type of family we are dealing with. In 207, or 51.5%, of the 402 families upon which we have reliable information, there was discovered a court record for various offences (including drunkenness). This is the record of offences against the law committed by the parents, brothers, sisters, or (in nine cases only) near relatives *prior* to the imprisonment of the men whom we are studying. In 118 families in addition (29.4%), there were delinquencies, such as drunkenness and immorality, which were apparently not recognized officially by police or courts. Thus, of the group of 402 families there were only 61 families (15.2%) in which it could be stated definitely that careful investigation had disclosed no known delinquency." (1)

"Criminality in the families of our *delinquent boys* was found to be very generally present. Of 918 families regarding whom this information was available, we found an official criminal record for parents or siblings or both in 532 (57.9%) cases. In addition there was criminality among parents and siblings of the juvenile delinquents, which somehow had escaped official recognition by police or courts, in 241 families (26.3%); and there was criminality among near relatives (though none were found in the immediate family) in 23 (2.5%) of the families. Thus, some 796 of the families involved (86.7% of the known total) contained members, other than the juvenile delinquent himself, who were delinquent or criminal. If we exclude those families in which drunkenness (whether resulting in arrest or not) was the only offence, 103 in number, there will still be some 75.4% of the families of our young delinquents containing members, other than the juvenile examined by the Judge Baker Foundation, who at one time or another had committed criminal acts." (3)

The same authors report (2), as follows, their findings of delinquency and criminality in the families of a group of delinquent women who had been *inmates of the Massachusetts Reformatory for Women*:

"In the high proportion of 80.7% of the cases there was delinquency and criminality among the members of the family (excluding our girl), as follows: in 45.5% of all the

families the parents or siblings had actually been arrested; in 31.0%, although arrests had not occurred, the antisocial conduct of parents or siblings was of such nature as to lay them open to arrest; and in 4.2% more of the cases, although there was no delinquency in the immediate family, near relatives with whom the girl was in frequent contact, or members of her foster family, were known delinquents. Thus in but 19.3% of the families was there no delinquent conduct among the members of the families of our girls."

The *fourth criterion* (higher incidence of traumatic syndromes in dizygotic twins as compared with singly-born siblings) can be shown to be fulfilled for cases of adult criminality by a comparison of the findings among dizygotic twins with those among singly-born siblings. The evidence has already been submitted in §2 of this monograph. For cases of child behavior difficulty of various types and for cases of juvenile delinquency the material that would be required for such a comparison is not available as far as we know. Accordingly, this phase of the matter must remain, for the present, as a subject for future research.

In our twin material there is abundant evidence which would harmonize with the requirements of the *fifth and sixth criteria* (premature birth and underweight condition at birth as factors in the etiology of traumatic syndromes). Such evidence is, however, inconclusive and could not be regarded as fulfilling the requirements. There is, of course, a high degree of correlation between twin births, on the one hand, and premature birth or underweight condition at birth or both, on the other. This phase of the matter, too, must remain, for the present, as a subject for future research. The material for such research will have to consist, obviously, of singly-born subjects rather than twins.

The fulfillment of the requirements of the *seventh criterion* (higher incidence of traumatic syndromes among twins as compared with singly-born subjects) is partly accomplished by a comparison of the findings among dizygotic twins with those among singly-born siblings, as already submitted in §2 of this monograph, for cases of adult criminality and with special reference to the requirements of the *fourth criterion*.

It would be desirable, though rather difficult, to gather special material for a further and final check of this phase of the matter.

As to the *eighth criterion* (characteristic occurrence of traumatic syndromes in childhood and adolescence), it would seem to be fulfilled by all criminologic statistics, despite the fact that such statistics, in so far as they pertain to age distribution of delinquency and crime, deal only with police, court, correctional school, reformatory, and prison

data, and not with the earliest manifestations in the form of child behavior difficulties, including so-called predelinquent traits.

TABLE II. AGE DISTRIBUTION OF SUBJECTS

Age	All subjects (at the time of our observation)		Subjects affected by behavior difficulty or delinquency (at the time of its onset)	
	Male	Female	Male	Female
Under 10 years_	40	44	141	73
10-19 years_---	241	225	183	143
20-29 years_---	108	50	39	6
30 years and over	75	35	14	3
Total_-----	464	354	377	225

We submit, in Table II, the pertinent data for our material. Computations from the figures given in the table show that among a total of 602 subjects who had shown child behavior difficulties, juvenile delinquency, adult criminality, or two of these, or all three in succession, the onset of the difficulty occurred before the age of 10 years in 35.5 per cent of the cases; under 20 years in 89.7 per cent.

Turning now to the *ninth criterion*, the requirement of which is to the effect that any condition in the etiology of which cerebral birth trauma characteristically plays an important part, would occur more often in the male than the female sex, all criminologic statistics without exception, including the material of this study, show that the requirement is not merely fulfilled, but greatly overfulfilled.

The significance of the enormous contrast between the sexes as to the relative incidence of delinquency and crime obviously extends far beyond the much slighter contrast—such as is noted in the statistics of mental deficiency and epilepsy—which is attributable to the greater cerebral vulnerability of male, as compared with female, fetuses.

As a matter of fact, the contrast existing between the sexes is not merely one of the relative amounts of crime but also of the types of delinquency and crime distinguished qualitatively. A further dis-

cussion of the factor of sex in the etiology of delinquency and criminality will be offered in a subsequent section of this monograph.

The requirement of the *tenth criterion*, which is to the effect that a syndrome produced by cerebral birth trauma should be found to occur more often among first-born than later-born subjects, was shown to be fulfilled, as regards the etiology of crime, in a study by Karl Pearson (9) published over a quarter of a century ago.

As far as we know, the material that would be required for the application of the *eleventh criterion* (dystocia as an etiologic factor) to our problem is at present not available. Accordingly, this issue, too, becomes a subject for future research.

The *twelfth criterion*, which is the last in our list, and which requires that a syndrome assumed to be characteristically produced by cerebral birth trauma, must be shown to be complicated, with significant frequency, by the coexistence, in the same subject, of other traumatic syndromes, may be judged to be fulfilled both by material to be found in the literature and by our data.

There is a much higher incidence of *epilepsy* among inmates of reformatories and prisons than in the unselected population—2.4 per cent, according to S. and E. T. Glueck (1), which is about five times as high as in the unselected population.

According to the same authors there is an abnormally high incidence of psychotic disease and of subnormal intelligence among inmates of reformatories and prisons—3.4 per cent and 42.9 per cent, respectively. The latter figure includes “feeble-mindedness” (I. Q. 50 to 70), 20.6 per cent; and “borderline deficiency” (I. Q. 70 to 80), 22.3 per cent.

In our twin material, too, the cases of child behavior difficulty, juvenile delinquency, and adult criminality were very often complicated with subnormal intelligence (I. Q. under 90), psychotic disease, epilepsy, infantile cerebral palsy, or various combinations of two or more of these.

Thus, among the total of 818 subjects included in our material, 188 were normal, *i.e.*, free from behavior difficulty, juvenile delinquency, adult criminality, and any of the above-enumerated complicating conditions. There were 28 other subjects affected only by subnormal intelligence (25 cases) or by epilepsy (3 cases), but not by any behavior abnormality, their twin brother or twin sister alone showing a behavior abnormality. The remaining 602 subjects were affected by one or another of the behavior abnormalities dealt with in this study. In 260 of these, *i.e.*, 43.2 per cent, there was also subnormal intelligence, often combined with one or more of the following conditions:

psychotic disease (22 cases), epilepsy (13 cases), infantile cerebral palsy (7 cases).

In our material the case histories are, in many instances, incomplete; and we believe that our figures, representing the incidence of complicating conditions associated with the behavior abnormalities, are an underestimate of the facts.

Thus, of the *twelve postulated criteria* for the establishment of child behavior difficulties, juvenile delinquency, and adult criminality as a group of conditions in the etiology of which cerebral birth trauma plays an important part, we find *seven* to be fulfilled either by material to be found in the literature, or by our twin material, or both (1, 2, 3, 8, 9, 10, and 12); *four* partly fulfilled (4, 5, 6, and 7); and *one* not fulfilled by reason of the lack of the necessary material. Apparently none of the available data are in conflict with the hypothesis under consideration.

Further research would be required for the final and complete verification of the hypothesis. In the meantime *we are led to the conclusion that all available facts point to cerebral birth trauma as an important etiologic factor in the behavior abnormalities which are the subject of this monograph.*

During the first stage of our research on mental disorders and behavior abnormalities in twins, when we were collecting our material, neither we nor others had fully appraised the importance of cerebral birth trauma as a factor in the etiology of many of the clinical conditions which we were investigating. Accordingly, the forms that we had prepared for our use in obtaining and recording data for our study had no provision for including information concerning conditions at birth of the twins.

Only a small number of our cases have in their records more or less definite reference to cerebral birth trauma as having occurred in one or both of the twins. In these cases the information was given to us spontaneously and incidentally. We refer particularly to the following cases: Nos. 47, 59, 135, 200, 248, 252, 256, 260, 274, 278, 319, 353, 373, 374, 376.

It is well known that postnatal cerebral trauma, too, is capable of being followed by chronic residuals or sequels characterized by delinquency or criminality. In this connection, however, postnatal trauma, as an etiologic factor, is of much less frequent occurrence than is that of intranatal trauma. Its importance, for us, lies in the very clear-cut demonstration which it affords of the fact of cerebral trauma as a cause of delinquency or criminality. In our material such demonstration is contained in the following cases: Nos. 90, 184, 339, 386.

There is a great deal of evidence indicating that a cerebral birth trauma which is, at the time of its occurrence, seemingly slight, or unnoticed, or even unnoticeable, is capable of being followed by residuals or sequels such as infantile cerebral palsy, epilepsy, mental deficiency, child behavior difficulty, juvenile delinquency, adult criminality, deteriorating psychoses, or various combinations of these.

Whether, in a given case, a cerebral birth trauma shall result in stillbirth, or in death in the neonatal period or in early infancy, as it often does; what degree of mental deficiency, if any, it shall produce; whether it shall give rise to one or another of the above-mentioned traumatic residuals or sequels; whether it shall produce but a relative mental deficiency, *i.e.*, leaving behind an intellectual capacity which is still within normal limits (as apparently happened in our cases Nos. 82 and 85); or whether it shall leave the subject without damage to his neurologic or mental function, are, presumably matters determined by the nature, extent, and localization of the brain injury and by the course of the subsequent tissue reaction.

The great diversity of syndromes and combinations of syndromes that may occur as residuals or sequels of cerebral birth trauma need not surprise us. Indeed, their diversity is far from being fully indicated in our enumeration of them. As we have had occasion to point out elsewhere, many other manifestations should be added, such as left-handedness; stuttering, stammering, lisping, or indistinct speech; spelling and reading disabilities; congenital aphasia; strabismus; extrapyramidal syndromes; enuresis, etc. In our individual case histories, sketchy and incomplete as most of them are, many instances of such conditions will be found.

Each of the syndromes presents a wide range of quantitative variation, from a scarcely demonstrable trace to a gross and crippling disability. No two cases are quite alike, even among monozygotic twins.

This diversity of manifestations, we repeat, need not surprise us. There would be no more reason to expect that the lesions in any two cases of cerebral trauma would be identical in severity, extent, and localization—and therefore in their clinical manifestations—than that the cracking or splintering of two glass tumblers would be identical upon their being dropped to a concrete floor.

Likewise, the occurrence of behavior abnormalities on a basis of cerebral lesions of other than traumatic origin need not surprise us. In our own material, instances of behavior difficulties based on infections with cerebral involvement are represented in cases Nos. 393 and 403, and probably in some others.

§ 10. SOCIAL AND ECONOMIC FACTORS IN DELINQUENCY AND CRIMINALITY

Among the etiologic factors in delinquency and criminality it is possible to distinguish, more or less clearly, some which are inherent in the individual and others which are external. Factors in the first group may be of hereditary nature or origin; or they may consist in residuals or sequels of cerebral birth trauma, or postnatal cerebral trauma, or in residuals or sequels of acute infectious encephalitides; or, as we have seen, they may appear as a product of a combination of an hereditary factor determining a special vulnerability of cerebral tissues and an acquired factor in the form of a cerebral birth trauma. Factors in the second group are frequently of social or economic nature; also of toxic nature, particularly in the form of the effects of alcohol (as in our cases Nos. 145, 146, 169, 183, 186, 188, 234, 276, 310, 351, 357, 359, 361, 365, 399, 405, 407, 408) or narcotic drugs (as in our cases Nos. 195, 363).

In analyzing the etiology of a given episode of antisocial behavior—assuming that all pertinent data are available in the given case—we find almost invariably that we are dealing with a product of the two groups of factors. The relative importance of the factors in the one and in the other group varies from case to case within wide limits.

The greater part of our twin material seems to indicate that, on the whole, the factors which are inherent in the individual, and which have been variously termed endogenous, constitutional, predisposing, etc., appear as the basic and truly etiologic factors of antisocial behavior. On the other hand, the external factors, which have been variously termed exogenous, environmental, precipitating, etc., are but quasi-etiological factors, appearing as occasions rather than causes of antisocial behavior. However, this circumstance renders the part played by the external factors no less real, and no less important from a practical standpoint.

In our own material the cases Nos. 54, 63, 64, 71, 136, 144, 222, 314, 359, and 394 are outstanding examples of delinquency and criminality in which external factors have been, relatively, of greater importance and in which, accordingly, a change of environment either has readily effected a satisfactory rehabilitation or may be expected to do so.

Among the social and economic factors in delinquency and criminality, that of *the broken home* is noted with significant frequency. Thus, in their investigation of parolees from the Massachusetts Reformatory, S. and E. T. Glueck (1) found that 60 per cent had come from broken homes; whereas in the unselected population broken homes are found to the extent of but 14 per cent. These authors have noted, further, that if, in addition to the broken homes, cases are included

whose parents were present but gave no adequate supervision, the percentage of abnormal homes is brought up to 84.

Other social and economic factors, though powerful in their effectiveness, are so vague, imponderable, and, no doubt, complex in their nature and manner of operation, as to be beyond the possibility of being specifically defined. It is to such factors that the great variations in the homicide rates of different countries, also in different parts of this country, and at different times, are to be attributed. The homicide rates have been studied by F. L. Hoffman (4):

"Our murder death rate for the registration area for the period 1909-1913 was 6.4 per 100,000 of population. The rate for England and Wales (1904-1913) was 0.8; for Prussia (1904-1913) 2.0; for Australia (1910-1913) 1.9; and finally, for Italy (1908-1912) 3.6." The homicide rates for large cities were as follows (1907-1911): Greater New York, 5.5; Paris, 3.5; Berlin, 2.0; London, 0.9; Copenhagen, 0.45.

In different parts of this country the homicide rates have varied over an almost incredibly wide range. Thus, in 77 cities with a total population of 28,221,698 in the year 1924, and with an average homicide rate of 9.9 per 100,000 of population, they varied from 0.0 in Concord, Lawrence, Malden, and Newton; and under 2.0 in Brockton, Fall River, Grand Rapids, Manchester, and New Bedford; to 32.5 in New Orleans, 36.0 in Nashville, and 58.8 in Jacksonville. Among American cities the highest homicide rates seem to be fairly consistently in Memphis, where, between 1910 and 1923, they have fluctuated between 51.8 and 88.7.

In this country, too, the homicide rates have varied widely from time to time. According to Hoffman's figures there was an upward trend between the years 1901 and 1924, when the rates rose from 4.9 to 10.3.

As another striking example of the powerful influence of social and economic factors in the causation of delinquency and criminality, may be mentioned the now well-established fact of delinquency areas in large cities.

This fact was first demonstrated for Chicago by C. R. Shaw and his collaborators (12) in 1929, and, since then, by these and by other workers, for a number of other cities.

For purposes of the Chicago study the city was divided into square-mile areas and into zones encircling "The Loop." The principal findings were as follows:

1. Male school truants brought before the Juvenile Court from 1917 to 1927 included from 0.0 to 15.4 per cent of the total male population 10 to 16 years of age in 1922, in different square-mile areas.

2. Percentages of boys dealt with as alleged delinquents by juvenile police probation officers during the year 1926 ranged from 0.0 to 26.6.

3. Delinquent boys dealt with by juvenile police probation officers during 1927 comprised from 0.0 to 21.8 per cent of the total, in different square-mile areas.

4. Different square-mile areas showed from 0.8 to 19.4 per cent of boys brought before the Juvenile Court as delinquents between 1917 and 1923.

5. Between 1900 and 1906 corresponding percentages ranged from 0.6 to 29.3.

6. Male offenders, aged 17 to 21 years, brought before the Boys' Court on felony charges between 1924 and 1926, included from 1.2 to 28.0 per cent of the male population aged 17 to 20 in 1925, in different square-mile areas.

7. Adult male offenders, 17 years of age or over, placed in Cook County jail during the year 1920, included from 0.15 to 5.2 per cent of the total male population between the ages of 17 and 44 years, in different square-mile areas.

8. Delinquent girls, aged 10 to 18 years, brought before the Juvenile Court between 1917 and 1923, represented from 0.1 to 9.0 per cent of the total in different square-mile areas.

9. In six zonal areas percentages of recidivism among juvenile delinquents varied from 32.1 to 60.4.

The authors of the study (12) offer some interesting comments:

"There is marked similarity in the distribution of truants, juvenile delinquents, and adult criminals in the city. High rates occur in the areas which are characterized by physical deterioration and declining populations. The highest rates are found in the areas adjacent to the central business districts and the larger industrial centers, while the lowest rates occur in the outlying residential communities. These areas are in the process of transition from residence to business and industry and are characterized by physical deterioration, decreasing population, and the disintegration of the conventional neighborhood culture and organization. When business and industry invade a community, the community thus invaded ceases to function effectively as a means of social control. It is probably significant that most of the boys appearing in the Juvenile Court are members of delinquent gangs."

It may be judged that the endogenous or constitutional factors of delinquency and criminality are of variable strength; and that in most cases they determine a tendency toward delinquency and criminality which, under ordinary conditions, remains latent.

It may be judged, further, that in so-called delinquency areas and other places which are characterized by a relatively high incidence of antisocial behavior, many social and economic factors are operative which force to the surface tendencies toward delinquency and criminality which, under ordinary conditions, would remain latent.

There is a great deal of evidence indicating that in a certain proportion of the cases the strength of the endogenous or constitutional factors making for delinquency and criminality is such that even under average or favorable social and economic conditions the tendency toward antisocial behavior fails to lapse into latency, but remains manifest and active in more or less marked degree.

In our material this point is well demonstrated in cases Nos. 148, 174, 175, 183, 184, 194, 195, 196, 216, 296, 327, 338, 340, 353, 355, 386, 387, 393, 405.

In this connection, the experiences had in recent years in the Soviet Union in the course of efforts of rehabilitation of prostitutes, alcoholics, and criminals, as reported by H. E. Sigerist (13), are of significance:

“Until 1931 the task of the prophylactoria was relatively easy, as most *prostitutes* were unemployed women driven into prostitution by poverty. They were normal women and were easy to re-educate. Once they had learned to work and had been given a job and a room, they were readjusted to life. After 1931 and the disappearance of unemployment, the task became infinitely more difficult, because *prostitutes* were then recruited from women who did not want to work. Many of them were psychopaths and feeble-minded girls, who were unable to perform any skilled labor and found it easier to make a living through prostitution. The Moscow prophylactoria treated 3,810 women between 1926 and 1935 of whom 3,277 were infected with venereal diseases. Of the 3,810 persons treated, 2,143 or 56.3 per cent later went to work in industry; 1,237 or 32.5 per cent voluntarily left the prophylactorium, and 382 or 10 per cent were expelled for having violated the rules of the institution. The prophylactorium keeps in constant touch with its former inmates who are working in factories or on farms. Ninety per cent of all the former pupils working in industries have remained there and 41 per cent of them have become shock workers, that is, highly qualified workers. Only 10 per cent have not remained at work. Half of these have returned to the prophylactorium for further education. In 1928 there were about 3,000 pros-

titutes in Moscow. This was at a time when 80,000 women workers were registered as unemployed. In 1930 it was found that the number had decreased to about 800."

"*Alcoholism*, like prostitution, is the result of unfavorable social and economic conditions. In 1913 the consumption of vodka, the most popular liquor in Russia, amounted to 8.1 litres or more than two gallons per person. The average worker spent more than a quarter of his wages on liquor. The average consumption of vodka dropped to 4.5 litres in 1931 and to 3.7 in 1935. Less than half of the pre-Revolutionary amount is now being consumed. It is very rare to see intoxicated persons in the streets of Soviet cities. *There are drunkards, of course, and the problem they present is very similar to that of prostitution.* As long as there was unemployment, some people spent their last kopek on liquor. *People who drink now are often neurotics and not easily curable.* Treatment, however, can be enforced by law. If a man is caught drunk, repeatedly, he can be arrested and can be compelled to undergo therapy in a special institution. The prophylactorium for the treatment of alcoholics in Moscow which I visited was organized in 1930 and has a staff of seven physicians and fifteen nurses. Patients stay there from four to six weeks and about a thousand persons are treated annually. The treatment is primarily educational and consists largely of occupational therapy. The prophylactorium maintains that 20 per cent of its patients are permanently cured, 30 per cent are temporarily cured, and 50 per cent represent doubtful cases."

"Closely connected with alcoholism and prostitution is another social disease, *crime*. In June, 1936, I visited the labor commune, Bolshevo, near Moscow, with its 5,000 members most of whom were former thieves. Today the commune consists not only of the 5,000 members but also of their families. Thus the commune has a total population of about 10,000. Among the facilities for the children of these former thieves is a splendid nursery which I found to be spotlessly clean and beautifully furnished. A crowd of happy youngsters attended by nurses were at play. When a person is convicted of crime, he is given an opportunity to work in Bolshevo or in a similar place instead of going to jail. It sometimes happens that criminals do not wait until they are caught by the police, but report voluntarily and ask to be allowed to work in a labor commune. Once a man has joined the group, full confidence is shown him. The colony is not guarded, but the members have to pledge themselves to keep four iron rules: never to steal, never to drink, to work, and to obey strictly the rules which the members themselves have made. Bolshevo has no state subsidy. It is not only self-supporting but it is a prosperous industrial center producing commodities valued at 80 million rubles a year. It has specialized in the manufacture of sporting goods, such as skis, hockey sticks, tennis

rackets, and footballs. Since treatment consists of reeducation to work, all members of the commune are employed in the various workshops. They receive union wages and pay for their board and lodging. A period of from two to three years is considered sufficient to reeducate a man. After that time, he may leave if he chooses and his criminal record is destroyed. Many, however, prefer to remain in the commune. Similar communes have been established in all the larger cities. Crime reached its peak between 1930 and 1933 when the kulaks opposed the Five-Year Plan. There has been a steady improvement since then. From 1933 to 1935, crimes against personal property decreased by 55 per cent, murder and manslaughter by 50 per cent, and sexual offenses by 75 per cent. There is still a great deal of hooliganism which will ultimately disappear when the last of the homeless waifs and vagrant children have been absorbed by society. *Regardless of future decreases in the amount of crime, there will always be some psychopaths who will become criminals. Their rehabilitation will constitute a difficult task, but one for which the medical profession should assume responsibility.*"

It would seem, then, that even under the most favorable conditions that can be provided in the treatment of antisocial behavior a residual group of cases will remain in which the prognosis as to rehabilitation will prove to be quite unfavorable. This suggests for these cases an underlying organic cerebral pathology, as does also a consideration of their etiology.

A large amount of crime, but not the major part of it, is found, upon close scrutiny, to be either mild or merely incidental, and manifested by persons who, by all reasonable standards, are to be judged as normal. The word *criminality* must include such, as well as other, cases in its designation. But the word *criminalism* should be more restricted in its application. It should be used to designate only cases of abnormal personality make-up, whether of hereditary, traumatic, or infectious etiology, which are characterized by a more or less marked and more or less persistent tendency toward antisocial behavior.

In our own material many cases are included which are classifiable in the category of mild or incidental criminality. As outstanding examples, the following may be referred to: Nos. 16, 19, 39, 89, 115, 137, 146, 181, 197, 198, 203, 253, 258, 318, 322, 325, 326, 328, 329, 340, 341, 342, 345, 346, 349, 352, 353, 358. The antisocial episodes in these cases have occurred mainly at adult ages and, characteristically, are not traceable to behavior difficulties of preneurotic, prepsychotic, or pre-delinquent types, or to delinquency, in childhood or adolescence. However, the touchstone whereby the differential diagnosis is to be made

between incidental criminality, on the one hand, and constitutional criminalism, on the other, is that of *recidivism*, which characterizes the latter category of cases.

All statistical evidence indicates that the bulk of crime is committed by recidivists. Thus, in the report *Prisoners 1938* recently published by the Bureau of the Census (16), we find, on page 8 in Table 8, that among felony prisoners received from courts, in the total number of 58,151, only 51.8 per cent were without prior commitment. The rest, who have accounted for at least 60 per cent of all the crime represented in the table—and probably much more than 60 per cent—had had from one to three or more prior commitments to jails, juvenile institutions, or prisons.

§ 11. SEX FACTORS IN DELINQUENCY AND CRIMINALITY

We have already had occasion, in § 8 of this monograph, to refer to sex factors in the etiology of delinquency and criminality. We shall now undertake a more detailed inquiry into this matter.

The higher incidence of child behavior difficulties, juvenile delinquency, and adult criminality in the male as compared with the female sex has been noted by all observers everywhere.

We have already had occasion to point out that all clinical conditions, which arise characteristically as residuals or sequels of cerebral birth trauma, are of higher incidence in the male than the female sex.

We have used, heretofore, the data revealed by opposite-sex twins as the most conclusive evidence of such higher incidence.

Thus, in a group of 139 pairs of opposite-sex twins, selected on the basis of the existence of *mental deficiency* in one or both of the twins in each pair, we found that 111 males and 87 females showed mental deficiency: a relative excess of males amounting to 27.6 per cent (10).

Similarly, in a group of 45 pairs of opposite-sex twins, selected on the basis of the existence of *epilepsy* in one or both of the twins in each pair, we found that 31 males and 21 females were epileptic: a relative excess of affected males amounting to 47.6 per cent (11).

In the material of this monograph the contrast between the sexes is even more striking.

We have a total of 140 pairs of opposite-sex twins selected on the basis of the existence of child behavior difficulty, juvenile delinquency, or adult criminality in one or both of the twins in each pair. We find that 115 of the males and 66 of the females are affected with one of these conditions: a relative excess of males amounting to 74.2 per cent.

The figures are not equal for the four groups of cases into which our material has been classified, as will be seen from Table III.

TABLE III. RELATIVE EXCESS OF MALES OVER FEMALES AFFECTED, IN FOUR CLINICAL GROUPS

Clinical group	Per cent of relative excess of males affected
Child behavior difficulties: preneurotic and prepsychotic types-----	15.4
Child behavior difficulties: predelinquent types-----	45.5
Juvenile delinquency-----	127.8
Adult criminality-----	154.5

Striking as the figures are for the last two groups of our cases, they represent, in our opinion, an underestimate of the contrast which actually exists between the sexes as to the incidence of juvenile delinquency and adult criminality. Our impression is that in the work of collecting our material for this monograph we received better cooperation from officials of female correctional schools, reformatories, and prisons than we did from those of corresponding male institutions. In consequence of this, female cases have attained, in our material, a disproportionately high representation.

The contrast existing between the sexes as to the incidence of juvenile delinquency and adult criminality is more fully represented in the statistics of correctional schools for juveniles and of penal institutions for adults.

Thus, on June 30, 1939, the two state correctional schools for boys in California (Whittier State School and Preston School of Industry) contained 1,033 inmates; whereas the corresponding institution for girls (Ventura State School) contained but 165 inmates: a relative excess of boys amounting to 526.1 per cent (14).

Similarly, the numbers of inmates in state and federal prisons and reformatories on December 31, 1938, according to a recently published report of the Bureau of the Census (16), were, males 154,383, and females 5,435: a relative excess of males amounting to 2,740.5 per cent.

The contrast, in this respect, as it exists between the sexes, becomes even more significant when we consider it not only in its quantitative, but also in its qualitative, aspects. The types of delinquent behavior are quite unlike in the two sexes.

Thus, among the 879 first commitments to the two correctional schools for boys in California (Whittier and Preston) during the year ended June 30, 1939, the causes of commitment in 734 cases—83.5 per cent of the total—were as follows, given here in their order of frequency: auto theft, burglary, grand and petty theft, incorrigibility, robbery, checks and forgery.

In contrast with this, the 137 first commitments to the correctional school for girls (Ventura), during the same year, were for the following causes: in danger of leading an immoral life, lack of parental control, habitually refuses to obey, home unfit, wandering with no fixed place of abode, violates an ordinance; in only one case was there a violation of the Motor Vehicle Code.

We see, then, from our comparison of the two sexes with reference to the respective amounts and kinds of delinquency and criminality among them, as no other data show it so fully, a great contrast in their fundamental psychologies. Here, as elsewhere, the male exhibits his venturesomeness, initiative, aggressiveness, and instinctive interests as gatherer and provider; the female her passivity and preoccupation with the love aspects of life.

Granting that cerebral birth trauma is an important etiologic factor in delinquency and criminality in both sexes; and granting that, by reason of the greater vulnerability of cerebral tissues peculiar to the male sex, the incidence of cerebral birth trauma, and of all its residuals and sequels, is higher in that sex; this circumstance accounts but in relatively small part for the enormous relative excess of delinquency and criminality in the male sex. Obviously, too, it accounts not at all for the qualitative differences in the delinquency and criminality of the two sexes.

Apparently, the part played by cerebral birth trauma or postnatal cerebral trauma as an etiologic factor in delinquency and criminality, is but that of impairing or destroying inhibitory brain mechanisms, the function of which is to control and regulate behavior. A free rein is thus gained for the now feebly inhibited or wholly uncontrolled behavior trends of the individual, which may be antisocial. But there is no ground whatever for assuming that cerebral trauma of any kind might be capable of reversing the fundamental psychologies of the sexes and thus, for example, imparting to a girl the aggressiveness and interests of the male as gatherer and provider, and of substituting these traits of masculine psychology for her natural passivity and instinctive sex interests.

§ 12. SUMMARY

The material on which this study is based consists of 409 pairs of twins, including both monozygotic and dizygotic types, which have been selected on the basis of the existence of child behavior difficulty, juvenile delinquency, or adult criminality in one or both of the twins in each pair.

The cases of child behavior difficulty are represented in 188 of these pairs of twins, subdivided into two groups: (a) preneurotic and prepsychotic types (120 cases), and (b) predelinquent types (68 cases).

The cases of juvenile delinquency are represented in 113 pairs of twins.

The cases of adult criminality are represented in 108 pairs of twins.

As to types of twins our material is divided as follows:

Monozygotic male twins-----	94 pairs
Monozygotic female twins-----	43 pairs
Same-sex dizygotic male twins-----	68 pairs
Same-sex dizygotic female twins-----	64 pairs
Opposite-sex (dizygotic) twins-----	140 pairs

The first fact yielded by a general survey of the material, is that the relative frequencies of concordant and discordant findings among monozygotic twins are in striking contrast to those among both same-sex and opposite-sex dizygotic twins, especially the latter. The frequencies of concordant findings are as follows:

Among monozygotic twins-----	86.9 per cent
Among same-sex dizygotic twins-----	41.7 per cent
Among opposite-sex twins-----	29.3 per cent

These findings are roughly in harmony with those previously reported for criminal twins by Lange, Legras, Stumpfl, and Kranz, and suggest that *hereditary factors play a part in the etiology of the behavior difficulties under consideration.*

However, hereditary factors alone do not, in all cases, suffice to produce these conditions, for discordant findings are revealed in 13.1 per cent of our cases of monozygotic twins.

There are, moreover, quantitative and qualitative intra-pair dissimilarities among those monozygotic twins who have presented concordant findings—a fact which tends to discount further the importance of heredity in the etiology.

The importance of hereditary factors is still further discounted by the fact of the high incidence of concordant findings among the dizygotic twins in our material, as compared with the corresponding findings among singly-born siblings. Control material for this pur-

pose is available only for the group dealing with adult criminality. Dizygotic twin brothers of criminal propoiti present concordant findings in 47.1 per cent of the cases, and twin sisters in 35.7 per cent. The corresponding figures for singly-born siblings are 23.8 and 11.5 per cent respectively. The genetic relationship existing between dizygotic twins is, of course, no closer than that between siblings. Accordingly, the enormous relative excess of concordance in dizygotic twins, as compared with singly-born siblings, can be attributed only to non-hereditary factors, to the influence of which both twins of a pair—whether monozygotic or dizygotic—are often jointly exposed.

As a corollary emerging from the evidence of the twin material, it appears that hereditary factors are not always present—therefore not essential—in the etiology of child behavior difficulty, juvenile delinquency, and adult criminality.

In §§ 3 to 7 inclusive our entire material is fully presented, classified in 80 groups of cases.

A detailed analysis of our material yields strong evidence indicating that *cerebral birth trauma is a factor of the highest importance in the etiology of child behavior difficulty, juvenile delinquency, and adult criminality.*

The question thus arises: What is the mechanism of cooperation between the hereditary factors and the factors of cerebral birth trauma?

It is one thing to say that hereditary factors play a part in the etiology of antisocial behavior; it would be quite another thing to say that there are special genetic factors which determine such behavior: for the latter proposition the evidence is so inadequate as to be practically negligible.

It appears, rather, that the hereditary factors which play a part in the etiology of antisocial behavior produce their effect by determining an undue vulnerability of the brain tissues, thus greatly increasing the hazard of cerebral birth trauma.

Like other syndromes occurring as manifestations of residuals and sequels of cerebral birth trauma, *antisocial behavior has its onset, for the most part, in childhood, adolescence, or early adult life.*

In our own material, for example, the onset of the difficulty occurred before the age of 10 years in 35.5 per cent of the cases; under 20 years in 89.7 per cent.

Cases of antisocial behavior often present, as complications, other conditions which also are known to occur as residuals or sequels of cerebral birth trauma.

Among the 818 individuals represented in our twin material selected for this study, there are 602 affected by one or another of the

behavior anomalies dealt with herein. In 260 of these, *i.e.*, 43.2 per cent, there was also subnormal intelligence, often combined with one or more of the following conditions: psychotic disease (22 cases), epilepsy (13 cases), infantile cerebral palsy (7 cases).

Whether, in a given case, a cerebral birth trauma shall result in stillbirth, or in death in the neonatal period or in early infancy, as it often does; what degree of mental deficiency, if any, it shall produce; whether it shall give rise to one or another of the post-traumatic residuals or sequels (infantile cerebral palsy, epilepsy, mental deficiency, child behavior difficulty, juvenile delinquency, adult criminality) or various combinations of these; whether it shall produce but a relative mental deficiency, *i.e.*, leaving behind an intellectual capacity which is still within normal limits; or whether it shall leave the subject without damage to his neurologic or mental function, are, presumably, matters determined by the nature, extent, and localization of the brain injury and by the course of the subsequent tissue reaction.

As we have had occasion to note elsewhere, many other possible manifestations should be added to the above list of residuals and sequels of cerebral birth trauma, namely, left-handedness; stuttering, stammering, lisping, or indistinct speech; spelling and reading disabilities; congenital aphasia; strabismus; extrapyramidal syndromes; enuresis; etc. In the individual case histories comprising the material of this study, sketchy and incomplete as most of them are, many instances of such conditions will be found.

Each of the post-traumatic syndromes presents a wide range of quantitative variation, from a scarcely demonstrable trace to a gross and crippling disability. No two cases are quite alike, even among the most closely concordant monozygotic twins.

This diversity of manifestations need not surprise us. There would be no more reason to expect that the lesions in any two cases of cerebral trauma would be identical in severity, extent, and localization—and therefore in their clinical manifestations—than that the cracking or splintering of two glass tumblers would be identical upon their being dropped to a concrete floor.

Among the so-called “exogenous,” “environmental,” or “precipitating” factors of delinquency and criminality, the most outstanding are those of *social or economic nature*; also of *toxic nature*, particularly in the form of *the effects of alcohol or narcotic drugs*.

These are not truly etiologic, but merely quasi-etiological factors, appearing as occasions, rather than causes, of antisocial behavior. However, this circumstance renders the part played by them no less real, and no less important from a practical standpoint. Such factors as those of *the broken home* and those of *delinquency areas* in large cities may be specially mentioned.

The elimination or correction of environmental factors can have the effect of a previously manifest and active delinquent or criminal tendency lapsing into latency, perhaps in a large majority of the cases; but even under the most favorable environmental conditions we may expect to find a residue of severe cases in which, by strong "endogenous" or "constitutional" determination, the tendency toward anti-social behavior will persist.

Incidental *criminality* should be distinguished from constitutional *criminalism*. The touchstone for the differential diagnosis here is that of *recidivism*. *The bulk of all crime is committed by the comparative handful of recidivists in our population.*

The factor of sex is of overwhelming importance in the etiology of delinquency and criminality. In the psychology of the sexes no contrast is so great as that represented by the comparative incidence in them of delinquency and criminality.

The most serviceable part of the twin material for bringing out this contrast is that describing the opposite-sex twins. From this part of our material it appears that the contrast is least marked among the cases of preneurotic and prepsychotic types of child behavior difficulties—with 15.4 per cent of relative excess of males affected—and most marked among the cases of adult criminality—with 154.5 per cent of relative excess of males affected.

By accident of selection, the contrast between the sexes, as represented in our material, is greatly underestimated. Among inmates of state and Federal prisons and reformatories, according to figures furnished by the Bureau of the Census, there is a relative excess of males affected amounting to 2,740.5 per cent.

The contrast is also a qualitative one. For example, among 879 commitments to the correctional schools for boys in California during the fiscal year ended June 30, 1939, the causes of commitment in 83.5 per cent of the cases were auto theft, burglary, grand and petty theft, incorrigibility, robbery, checks and forgery. In the same year the causes of 137 commitments to the correctional school for girls were as follows: in danger of leading an immoral life, lack of parental control, habitually refuses to obey, home unfit, wandering with no fixed place of abode, violates an ordinance; in only one case was there a violation of the Motor Vehicle Code.

In small part the contrast existing between the sexes as to incidence of delinquency and criminality is to be accounted for by *the greater vulnerability of the cerebral tissues in males, as compared with females, with their resulting greater liability to suffer cerebral birth trauma.* But for the most part we are dealing here with a special

expression of a fundamental biologic fact. *Here, as elsewhere, the male exhibits his venturesomeness, initiative, aggressiveness, and instinctive interests as gatherer and provider; the female her passivity and preoccupation with the love aspects of life.*

Apparently, the part played by cerebral birth trauma or post-natal cerebral trauma, as an etiologic factor in delinquency and criminality, is but that of impairing or destroying inhibitory brain mechanisms, the function of which is to control and regulate behavior. A free rein is thus gained for the now feebly inhibited or wholly uncontrolled behavior trends of the individual—whether they be in the direction of masculine or of feminine lines of interest and activity—which may be “neurotic,” “psychotic,” or “antisocial.”

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